

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

FORM 10-K

(Mark One)

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

For the fiscal year ended July 31, 2022

or

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

For the transition period from _____ to _____

Commission File Number 001-35594

Palo Alto Networks, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

20-2530195
(I.R.S. Employer
Identification No.)

3000 Tannery Way
Santa Clara, California 95054
(Address of principal executive 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	Trading Symbol(s)	Name of each exchange on which registered
Common stock, \$0.0001 par value per share	PANW	The Nasdaq Stock Market LLC (Nasdaq Global Select Market)

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

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

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

The aggregate market value of voting stock held by non-affiliates of the registrant was \$49,978,456,856 as of January 31, 2022, 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 Nasdaq Global Select Market on such date). Shares of common stock held by each executive officer and director 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 22, 2022, 99,737,936 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 2022 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, 2022.

TABLE OF CONTENTS

	Page
PART I	
Item 1. Business	4
Item 1A. Risk Factors	14
Item 1B. Unresolved Staff Comments	40
Item 2. Properties	40
Item 3. Legal Proceedings	40
Item 4. Mine Safety Disclosures	40
PART II	
Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	41
Item 6. [Reserved]	42
Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations	43
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	57
Item 8. Financial Statements and Supplementary Data	58
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	98
Item 9A. Controls and Procedures	98
Item 9B. Other Information	98
Item 9C. Disclosure Regarding Foreign Jurisdictions That Prevent Inspections	98
PART III	
Item 10. Directors, Executive Officers, and Corporate Governance	99
Item 11. Executive Compensation	99
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	99
Item 13. Certain Relationships and Related Transactions, and Director Independence	99
Item 14. Principal Accountant Fees and Services	99
PART IV	
Item 15. Exhibits and Financial Statement Schedules	100
Signatures	105

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,” “project,” “plan,” “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:

- the effects of supply chain challenges and the global chip and component shortages and other factors affecting the manufacture, delivery and cost of certain of our products;
- expectations regarding drivers of and factors affecting growth in our business;
- the performance advantages of our products and subscription and support offerings and the potential benefits to our customers;
- statements regarding trends in billings, our mix of product and subscription and support revenue, cost of revenue, gross margin, cash flows, operating expenses, including future share-based compensation expense, income taxes, 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, in our employees 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;
- expectations regarding our revenues, including the seasonality and cyclicity from quarter to quarter;
- 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 expectations regarding the future results of our People Strategy;
- our expectation that we will increase our customer financing activities;
- the sufficiency of our cash flow from operations with existing cash, cash equivalents and investments to meet our cash needs for the foreseeable future;
- our expectations regarding the impact of the discontinuance of the LIBO Rate upon our liquidity or financial position;
- 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;
- our expectations regarding the impacts on our business, the business of our customers, suppliers and partners, and the economy as a result of the global COVID-19 pandemic and related public health measures; 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 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

Palo Alto Networks, Inc. is a global cybersecurity provider with a vision of a world where each day is safer and more secure than the one before. We were incorporated in 2005 and are headquartered in Santa Clara, California.

We empower enterprises, organizations, service providers, and government entities to protect themselves against today's most sophisticated cyber threats. Our cybersecurity platforms and services help secure enterprise users, networks, clouds, and endpoints by delivering comprehensive cybersecurity backed by industry leading artificial intelligence and automation. We are a leading provider of zero trust solutions, starting with next-generation zero trust network access to secure today's remote hybrid workforces and extending to securing all users, applications and infrastructure with zero trust principles. Our security solutions are designed to reduce customers' total cost of ownership by improving operational efficiency and eliminating the need for siloed point products. Our company focuses on delivering value in five fundamental areas:

Network Security:

- Our network security platform, which includes our ML-Powered Next-Generation Firewalls, available in a number of form factors, including physical, virtual, and containerized appliances, as well as a cloud-delivered service, has been recognized as a leader in the industry. Our network security platform also includes our Cloud-Delivered Security Services, such as Threat Prevention, Advanced Threat Prevention, WildFire[®], Advanced URL Filtering, DNS Security, IoT Security, GlobalProtect[™], SD-WAN, Enterprise Data Loss Prevention ("Enterprise DLP"), AIOps, SaaS Security API, and SaaS Security Inline. Through these add-on security services, our customers are able to secure their content, applications, users, and devices across our network security platform as well as the Prisma[®] and Cortex[®] product lines. Panorama[™], our network security management solution, available as hardware or virtual machine, can centrally manage our network security platform irrespective of form factor, location, or scale.

Secure Access Service Edge:

- Prisma Access is our next-generation Zero Trust Network Access ("ZTNA") platform that provides secure network access for all employees with unified policy management and continuous threat inspection. We have recently introduced ZTNA 2.0, which addresses major shortcomings in the first-generation ZTNA products in the industry (which we refer to as ZTNA 1.0). Prisma Access delivers granular least-privileged access along with continuous trust verification and security inspection, and protects security for all applications and data across the enterprise infrastructure. Prisma Access, when combined with Prisma SD-WAN, provides a comprehensive single-vendor Secure Access Service Edge ("SASE") offering that is used to secure remote workforces and enable the cloud-delivered branch.

Cloud Security:

- We enable cloud native security through our Prisma Cloud platform. As a comprehensive Cloud Native Application Protection Platform ("CNAPP"), Prisma Cloud secures hybrid and multi-cloud environments for applications, data, and the entire cloud native technology stack across the full development lifecycle; from code to runtime. For inline network security on multi and hybrid-cloud environments, we also offer our VM-Series and CN-Series Firewall offerings.

Security Operations:

- We deliver the next generation of endpoint security, security analytics and security automation solutions through our Cortex portfolio. These include our industry-leading extended detection and response platform Cortex XDR[®] to prevent, detect, and respond to complex cybersecurity attacks, Cortex XSOAR[®] for security orchestration, automation, and response ("SOAR"), Cortex Xpanse[®] for attack surface management ("ASM"), and Cortex Data Lake allowing our customers to collect and analyze large amounts of context-rich data across endpoints, networks, and clouds. These products are delivered as software subscriptions or SaaS subscriptions.

Threat Intelligence and Security Consulting (Unit 42):

- We enable security teams with up-to-date threat intelligence and deep cybersecurity expertise before, during and after attacks through our Unit 42 threat research and security consulting team. Unit 42 offers incident response, risk management, board advisory, and proactive cybersecurity assessment services.

Product, Subscription, and Support

Our products are available in the form of the product, subscription, and support offerings described below.

Products

Firewall Appliances and Software. Our ML-Powered Next Generation Firewalls embed machine learning in the core of the firewall and employ inline deep learning in the cloud, empowering our customers to stop zero-day threats in real time, see and secure their entire enterprise including IoT, and reduce errors with automatic policy recommendations. 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. The content, applications, users, and devices—the elements that run a business—become integral components of an enterprise’s security policy via our Content-ID™, App-ID™, User-ID™, and Device-ID technology. In addition to these components, key features include 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-410, which is designed for small organizations and branch 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, a containerized form factor, called CN-Series, as well as 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. We also offer Cloud NGFW, a managed next-generation firewall (“NGFW”) offering, to secure customers’ applications on Amazon Web Services (“AWS”).

Panorama. Panorama is our centralized security management solution for global control of all of our firewall appliances and software deployed on a customer’s network, as well as in their instances in public or private cloud environments. Panorama can be deployed 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, virtual and containerized systems under management. Panorama centrally manages device software and associated updates, including SSL-VPN clients, SD-WAN, dynamic content updates, and software licenses. Panorama offers network security monitoring through the ability to view logs and run reports from all managed appliances and software in one location without the need to forward the logs and reliably expands log storage for long-term event investigation and analysis.

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 customers.

Subscriptions

We offer a number of subscriptions as part of our portfolio. Of these subscription offerings, cloud-delivered security services like Threat Prevention, Advanced Threat Prevention, WildFire, Advanced URL Filtering, DNS Security, IoT Security, SaaS Security Inline, GlobalProtect, SD-WAN, Enterprise DLP and AIOps are sold as options to our firewall appliances and software, whereas Prisma Cloud, Prisma Access, Prisma SD-WAN, SaaS Security API, Cortex XDR, Cortex XSOAR, Cortex Xpanse and Cortex Data Lake are sold on a per-user, per-endpoint, or capacity-based basis. Our subscription offerings include:

Cloud-delivered Security Services:

- **Threat Prevention.** This cloud-delivered security service provides intrusion detection and prevention capabilities and 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, and workflows to manage popular open-source signature formats to extend our leading coverage.
- **Advanced Threat Prevention.** This cloud-delivered security service builds on all of the capabilities of Threat Prevention, adding the industry’s first Inline Deep Learning protection engine for Command-and-Control (“C2”). It delivers real-time detection and prevention of unknown, evasive, and targeted C2 communications over HTTP, unknown-TCP, unknown-UDP and encrypted over SSL. Advanced Threat Prevention is the first offering to protect patient zero from unknown command and control in real-time.

- **WildFire.** This cloud-delivered security service (which can also be delivered as an appliance) provides protection against targeted malware and advanced persistent threats and provides a near real-time analysis engine for detecting previously unseen malware while resisting attacker evasion techniques. The core component of this subscription goes beyond traditional sandbox environments and can operate on an end-customers' local environment, private cloud or our public cloud. WildFire combines dynamic and static analysis, recursive analysis, and a custom-built analysis environment with network traffic profiling and fileless attack detection to discover even the most sophisticated and evasive threats. A machine learning module derived from the cloud sandbox environment is now delivered inline on the ML-Powered Next-Generation Firewalls to identify the majority of unknown threats without cloud connectivity. Once identified, whether in the cloud or inline, preventive measures are automatically generated and delivered in seconds or less across networks, clouds, endpoints, or wherever WildFire-enabled sensors are deployed. By providing this as a cloud-based subscription, all of our end-customers benefit from malware found on any of our end-customers' networks.
- **Advanced URL Filtering.** This cloud-delivered security service offers the industry's first Inline Deep Learning powered web protection engine. It delivers real-time detection and prevention of unknown, evasive, and targeted web-based threats such as phishing, malware, and command-and-control. While many vendors use machine learning to categorize web content or prevent malware downloads, Advanced URL Filtering is the industry's first inline web protection engine capable of detecting never-before-seen web-based threats and preventing them in real-time. In addition, it includes a cloud-based URL filtering database which consists of millions of URLs across many categories and is designed to analyze web traffic and prevent web-based threats such as phishing, malware, and command-and-control.
- **DNS Security.** This cloud-delivered security service uses machine learning to proactively block malicious domains and stops attacks in progress. Unlike other solutions, it does not require endpoint routing configurations to be maintained and therefore cannot be bypassed. It allows firewalls access to DNS signatures that are generated using advanced predictive analysis, machine learning, and malicious domain data from a growing threat intelligence sharing community of which we are a part. Expanded categorization of DNS traffic and comprehensive analytics allow deep insights into threats, empowering security personnel with the context to optimize their security posture. It offers comprehensive DNS attack coverage and includes industry-first protections against multiple emerging DNS-based network attacks.
- **IoT Security.** IoT Security is a cloud-delivered security service on our ML-Powered Next-Generation Firewalls with backward compatibility to older versions of PAN-OS. Using machine learning and our App-ID technology, it can accurately identify and classify various IoT and operational technology ("OT") devices, including never-been-seen-before devices, mission critical OT devices and unmanaged legacy systems. It uses machine learning to baseline normal behavior, identify anomalous activity, assess risk, and provide policy recommendations to allow trusted behavior with a new Device-ID policy construct on our ML-Powered Next-Generation Firewalls. Our existing subscription-based security services have also been enhanced with IoT context to prevent threats on various devices, including IoT and OT devices.
- **SaaS Security API.** SaaS Security API (formerly Prisma SaaS) is a multi-mode, cloud access security broker service that helps govern sanctioned SaaS application usage across all users and helps prevent breaches and non-compliance. Specifically, the service enables the discovery and classification of data stored across the supported SaaS applications, protects sensitive data from accidental exposure, identifies and protects against known and unknown malware, and performs user activity monitoring to identify potential misuse or data exfiltration. It delivers complete visibility and granular enforcement across all user, folder, and file activity within sanctioned SaaS applications, and can be combined with SaaS Security Inline for a complete integrated cloud access security broker ("CASB").
- **SaaS Security Inline.** SaaS Security Inline is a recent cloud-delivered security service on our ML-Powered Next Generation Firewalls that adds an inline service to automatically gain visibility and control over the tens of thousands of known and new sanctioned, unsanctioned and tolerated SaaS applications in use within organizations today. It provides enterprise data protection and compliance across all SaaS applications and prevents cloud threats in real time with best-in-class security. The solution is easy to deploy being natively integrated on our range of ML-Powered Next-Generation Firewalls, eliminating the architectural complexity of traditional CASB products, while offering low total cost of ownership. It can be combined with SaaS Security API as a complete integrated CASB.
- **GlobalProtect.** This appliance-based subscription provides protection for users of both traditional laptop and mobile devices. It expands the boundaries of the end-users' 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. Regardless of the operating systems, laptops, tablets and phones will stay connected to the corporate network when they are on a network of any kind and, as a result, 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.

- **SD-WAN.** Our SD-WAN subscription is integrated with PAN-OS, so that our end-customers can get the security features of our PAN-OS ML-Powered Next-Generation Firewall together with SD-WAN functionality. The SD-WAN overlay supports dynamic, intelligent path selection based on the applications, services and conditions of the links that each application or service is allowed to use, allowing applications to be prioritized based on criteria such as whether the application is mission-critical, latency-sensitive, or meets certain health criteria.
- **Enterprise DLP.** This cloud-delivered security service provides consistent, reliable protection of sensitive data, such as personally identifiable information (“PII”) and intellectual property, for all traffic types, applications, and users. Native integration with our products makes it simple to deploy, and advanced machine learning minimizes management complexity. Enterprise DLP allows organizations to consistently discover, classify, monitor, and protect sensitive data, wherever it may reside. It helps minimize the risk of a data breach both on-premises and in the cloud—such as in Office/Microsoft 365™, Salesforce®, and Box—and assists in meeting stringent data privacy and compliance regulations, including GDPR, CCPA, PCI DSS, HIPAA, and others.
- **AIOps for NGFW:** AIOps for NGFW is a new cloud-delivered security service available on ML-Powered Next-Generation Firewalls and Panorama that run on PAN-OS 10.0 and above, and is available in both free and licensed premium versions. AIOps for NGFW redefines firewall operational experience by empowering security teams to proactively strengthen security posture and resolve firewall disruptions. AIOps for NGFW provides continuous best practice recommendations powered by machine learning (“ML”) based on industry standards, security policy context, and advanced telemetry data collected from all Palo Alto Networks® firewalls to improve security posture. It also intelligently predicts firewall health, performance, and capacity problems up to seven days in advance and provides actionable insights to resolve the predicted disruptions.

Cloud Security:

- **Prisma Cloud.** Prisma Cloud is a comprehensive CNAPP, securing both cloud native and lift-and-shift applications across hybrid- and multi-cloud environments. With broad security and compliance coverage and a flexible agentless, as well as agent-based, architecture, Prisma Cloud protects cloud-native applications spanning hosts, containers, serverless architectures and other platform as a service (“PaaS”) offerings across cloud platforms. It dynamically discovers public cloud resources as they are deployed and correlates cloud data services (resource configurations, flow logs, audit logs, host and container logs, etc.) to provide timely security and compliance insights for cloud applications. The platform uses machine learning to profile user, workload, and application behaviors to identify and prevent advanced threats.

For security and development and operations teams, Prisma Cloud removes the impedance mismatch between security and cloud-driven agility by integrating with continuous integration and continuous development (“CI/CD”) tool chains to provide full lifecycle vulnerability management, compliance, infrastructure-as-code scanning, and runtime defense. With a comprehensive library of compliance frameworks, it vastly simplifies the task of maintaining compliance. Prisma Cloud accomplishes this through deep context-sharing that spans infrastructure, PaaS, users, development platforms, data, and application workloads. Seamless integration with security orchestration tools ensures rapid remediation of vulnerabilities and security issues.

Prisma Cloud delivers cloud security posture management, cloud workload protection platform, cloud network security, cloud code security, and cloud identity security capabilities that provide continuous visibility and protection across an organization’s hybrid, and multi-cloud infrastructure.

Secure Access Service Edge:

- **Prisma Access.** Prisma Access is a cloud-delivered security offering that helps organizations deliver consistent security to remote networks and mobile users. Located in more than 100 locations around the world, Prisma Access consistently inspects all traffic across all ports and provides bidirectional networking to enable branch-to-branch and branch-to-headquarter traffic. Prisma Access consolidates more point-products into a single converged cloud-delivered offering than any competing solution, transforming network security and allowing organizations to enable secure hybrid workforces. Unlike competing solutions, only Prisma Access protects all application traffic with complete, best-in-class security while ensuring an exceptional user experience with industry-leading service-level agreements (“SLA”s).
- **Prisma SD-WAN.** Our Prisma SD-WAN solution is a next-generation SD-WAN solution that makes the secure cloud-delivered branch possible. Prisma SD-WAN enables organizations to replace traditional Multiprotocol Label Switching (“MPLS”) based WAN architectures with affordable broadband and internet transport types that promote improved bandwidth availability, redundancy and performance at a reduced cost. Prisma SD-WAN leverages real-time application performance SLAs and visibility to control and intelligently steer application traffic to deliver an exceptional user experience. Unlike legacy SD-WAN solutions that introduce cost and complexity, our Prisma SD-WAN ensures an excellent user experience with application-defined policies and simplifies network and security operations using machine learning and automation.

Security Operations:

- **Cortex XDR.** This cloud-based subscription enables organizations to collect telemetry from endpoint, network, identity and cloud data sources and apply advanced analytics and machine learning across all data, to quickly find and stop targeted attacks, insider abuse, and compromised endpoints. Cortex XDR has two product tiers: XDR Prevent and XDR Pro. XDR Prevent delivers enterprise-class endpoint security focused on preventing attacks. XDR Pro extends endpoint detection and response (“EDR”) to include cross-data analytics, including network, cloud and identity data. These capabilities build on each other such that a customer can start with XDR Prevent, then upgrade to XDR Pro for endpoints or XDR Pro for cross-data analytics. Going beyond EDR, Cortex XDR detects the most complex threats using analytics across key data sources and reveals the root cause, which can significantly reduce investigation time as compared to siloed tools and manual processes.
- **Cortex XSOAR.** Available as a cloud-based subscription or an on-premises appliance, Cortex XSOAR is a comprehensive SOAR offering that unifies playbook automation, case management, real-time collaboration, and threat intelligence management to serve security teams across the incident lifecycle. With Cortex XSOAR, security teams can standardize processes, automate repeatable tasks and manage incidents across their security product stack to improve response time and analyst productivity. It learns from the real-life analyst interactions and past investigations to help SOC teams with analyst assignment suggestions, playbook enhancements, and best next steps for investigations. Many of our customers see significantly faster SOC response times and a significant reduction in SOC alerts which require human intervention.
- **Cortex Xpanse.** This cloud-based subscription provides attack surface management, which is the ability for an organization to identify what an attacker would see amongst all of its sanctioned and unsanctioned Internet-facing assets. In addition, Cortex Xpanse detects risky or out-of-policy communications between Internet-connected assets that can be exploited for data breaches or ransomware attacks. Cortex Xpanse continuously identifies Internet assets, risky services or misconfigurations in third parties to help secure a supply chain or identify risks for mergers and acquisitions due diligence. Finally, compliance teams use Cortex Xpanse to improve their audit processes and stay in compliance by assessing their access controls against regulatory frameworks.
- **Cortex Data Lake.** This cloud-based subscription allows our customers to collect and analyze large amounts of context-rich network security data. This includes a collection of enhanced network logs generated by our security offerings, including those of our ML-Powered Next-Generation Firewalls and Prisma Access subscription, eliminating the need to plan for local data storage.

Support

Customer Support. Global customer support helps our customers achieve their security outcomes with services and support capabilities covering the customer's entire journey with Palo Alto Networks. This post-sales, global organization advances our customers' security maturity, supporting them when, where, and how they need it. We offer Standard Support, Premium Support, Four-Hour Premium Support and Platinum 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 a service offering called Focused Services that includes Customer Success Managers (“CSM”) to provide support for end-customers with unique or complex support requirements. We offer our end-customers ongoing support for hardware, software and certain cloud offerings 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.

Threat Intelligence, Incident Response and Security Consulting. Unit 42 brings together world-renowned threat researchers, incident responders and security consultants to create an intelligence-driven, response-ready organization that is passionate about helping clients proactively manage cyber risk. We help security leaders assess and test their security controls, transform their security strategy with a threat-informed approach and respond to incidents rapidly. The Unit 42 Threat Intelligence team provides threat research that enables security teams to understand adversary intent and attribution, while enhancing protections offered by our products and services to stop advanced attacks. Our security consultants serve as trusted partners with state-of-the-art cyber risk expertise and incident response capabilities, helping customers focus on their business before, during, and after a breach.

Professional Services. Professional services are primarily delivered directly by Palo Alto Networks and through a global network of authorized channel partners to our end-customers and include on-location and remote, hands-on experts who plan, design, and deploy effective security solutions tailored to our end-customers' specific requirements. These services include architecture design and planning, implementation, configuration, and firewall migrations for all our products including Prisma and Cortex deployments. Customers can also purchase on-going technical experts to be part of customer's security teams to aid in the implementation and operation of their Palo Alto Networks capabilities. Our education services include certifications, as well as free online technical courses and in-classroom training, which are primarily delivered through our authorized training partners.

Research and Development

Our research and development efforts are 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 industry. 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 efforts 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.

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 2022, we introduced several new offerings, including: Prisma Cloud 3.0, Prisma Access 3.0, AIOps for NGFW, PAN-OS 10.2, and Cloud NGFW for AWS. Additionally, we acquired productive investments that fit well within our long-term strategy.

We plan to continue to significantly invest in our research and development efforts as we evolve and extend the capabilities of our portfolio.

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 intellectual property 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.

Government Regulation

We are subject to numerous U.S. federal, state, and foreign laws and regulations covering a wide variety of subject matters. Like other companies in the technology industry, we face scrutiny from both U.S. and foreign governments with respect to our compliance with laws and regulations. Our compliance with these laws and regulations may be onerous and could, individually or in the aggregate, increase our cost of doing business, impact our competitive position relative to our peers, and/or otherwise have an adverse impact on our business, reputation, financial condition, and operating results. For additional information about government regulation applicable to our business, see Part I, Item 1A “Risk Factors” in this Form 10-K.

Competition

We operate in the intensely competitive enterprise security industry 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 five categories:

- large companies that incorporate security features in their products, such as Cisco Systems, Inc. (“Cisco”), 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 Check Point Software Technologies Ltd. (“Check Point”), Fortinet, Inc. (“Fortinet”), and Zscaler, Inc. (“Zscaler”), that offer a mix of network and endpoint security products;
- startups and single-vertical vendors that offer independent or emerging solutions across various areas of security;
- public cloud vendors and startups that offer solutions for cloud security (private, public and hybrid cloud); and
- large and small companies, such as CrowdStrike, Inc. (“CrowdStrike”), that offer solutions for security operations and endpoint security.

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 portfolio, 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, Marketing, Services and Support

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 portfolio of products 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. No single end-customer accounted for more than 10% of our total revenue in fiscal 2022, 2021, or 2020.

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 to 90 days written notice prior to the renewal date, and payment to us from the channel partner within 30 to 45 calendar days of the date we issue an invoice for such sales. For fiscal 2022, 53.6% 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 to expand our reach in all key growth sectors.

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 attainment goals, as well as provides them access to marketing funds, technical and sales training, and support. To promote optimal productivity, we operate a formal accreditation program for our channel partners' sales and technical professionals. As of July 31, 2022, we had more than 6,700 channel partners.

Global Customer Success. Our Global Customer Success ("GCS") organization is responsible for delivering professional, educational and support 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 professional, educational and support services to enable these services to be 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 portfolio and driving pipeline and end-customer demand. Our marketing team consists primarily of product marketing, brand, demand generation, field marketing, digital marketing, communications, analyst relations and marketing analytics functions. Marketing activities include pipeline development through demand generation, social media and advertising programs, managing the corporate website and partner portal, trade shows and conferences, analyst relationships, customer advocacy, and customer awareness. Every year we organize multiple signature events, such as our end-customer conference “Ignite” and focused conferences such as “Cortex Symphony” and “SASE Converge.” We also publish threat intelligence research such as the Unit 42 Cloud Threat Report and the Unit 42 IoT Threat Report, which are based on data from our global threat intelligence team, Unit 42. 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 upon fulfillment and are included in deferred revenue. Contract amounts that are not recorded in deferred revenue or revenue are considered backlog. We expect backlog related to subscription and support offerings will change from period to period for various reasons, including the timing and duration of customer orders and varying billing cycles of those orders. Products are billed upon shipment. The majority of our product revenue comes from orders that are received and shipped in the same quarter. However, insufficient supply and inventory may delay our hardware product shipments. As such, we do not believe that our product backlog at any particular time is 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 generally occurring in our fiscal second and fourth quarters.

Manufacturing

We outsource the manufacturing of our 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 us from various component suppliers. Our manufacturing and supply contracts, generally, do not guarantee a certain level of supply or fixed pricing, which increases our exposure to supply shortages or price increases.

Human Capital

We believe our ongoing success depends on our employees. Development and investment in our people is central to who we are, and will continue to be so. With a global workforce of 12,561 as of July 31, 2022, we take our People Strategy and FLEXWORK philosophy seriously and care for our employees. This is a critical element of our overall company strategy. Our People Strategy is a comprehensive approach to source, hire, onboard, integrate, develop, engage and reward employees.

FLEXWORK. Throughout the COVID-19 pandemic, while prioritizing the health and safety of our employees, we have learned how to collaborate in a distributed hybrid work reality and to create opportunities for employees to maintain a sense of belonging and focus on well-being. In the future, we aim to continue to disrupt the nature of work. Our philosophy is simple: place our employees at the center of their working life by providing employees flexibility, personalization, and choice regarding how they work, the benefits they choose, the way they consume learning and, where possible, where and when they work. We believe that the more our employees have choice and demonstrate mutual trust and respect, the more engaged they will be.

FLEXWORK adds even more opportunity to scale our efforts to improve Inclusion and Diversity (“I&D”). It further enables us to recognize each individual as unique, with their own priorities and needs, and gives the employee greater agency to personalize their decisions and utilize our programs and initiatives to meet those interests and desires.

Source & Hire. Sourcing and hiring diverse talent and enabling them to create and execute is central to our comprehensive approach to talent acquisition, which we refer to as “The Way We Hire.” Our talent acquisition team utilizes a number of methods to find subject experts in their respective fields, including the use of a variety of channels that focus on reaching underrepresented talents. Our university relations team partners with hundreds of academic institutions, including colleges and universities that focus on serving diverse populations, to provide career pathways for early-in-career candidates. We also encourage current employees to provide qualified referrals, and to utilize our internal mobility program to grow their careers. We equip hiring managers with training so that they are made aware of potential unconscious biases and interview for the values and competencies that we believe enhance our culture. We have diverse interview panels to deliver a quality interview experience to a diverse slate of candidates.

Onboard & Integrate. We believe that a positive onboarding experience is foundational to our employees thriving and therefore to rapid productivity. During the COVID-19 pandemic, we built and utilized virtual learning platforms and employee communication channels to provide new employees with inspirational, often personalized, onboarding experiences. Onboarding is a journey of integration that extends through the first year at Palo Alto Networks for every employee. In addition, we have built specialist learning tracks for interns and new graduates that have been recognized as best in class externally. As part of our merger and acquisition strategy, we have also established a robust integration program with the goal to enable individuals joining our teams to feel part of our culture at speed.

Develop & Motivate. FLEXLearn is our unique approach to personalized employee development. FLEXLearn is a learning experience platform that provides employees with a path based on their needs, interests, style, and career journey. Through FLEXLearn, employees have full agency to direct their growth at their pace and choosing. Development information about core business elements, professional skill sets, working in a distributed hybrid environment, as well as required company-wide compliance training, such as Code of Conduct, privacy and security, anti-discrimination, anti-harassment, and anti-bribery training, is also deployed through the FLEXLearn platform for all employees. In addition, FLEXLearn provides employees with events and activities that motivate and spark critical thinking, on topics ranging from inclusion, to well-being and collaboration. On average, employees had completed 16 hours of development through the FLEXLearn platform during fiscal 2022.

Engage & Reward. We conduct regular executive listening sessions and “pulse surveys” to better understand employee engagement, sentiment, well-being, and the ability to transition to a distributed work model. Many of these sessions have informed our holistic People Strategy, our FLEXWORK philosophy, I&D strategies, and Internal Mobility program.

Employee sentiment has continued to be highly positive. We continue to use insights from an anonymous global employee engagement survey we conducted in 2021 to execute action plans that reinforce our culture of engagement. Our internal pulse surveys and other feedback mechanisms, including insights from external employee sentiment sources and employer brand recognition, indicate that employees have a strong sense of belonging, confidence in leadership, and an understanding of how their work contributes to the Company’s goals.

In addition to a comprehensive compensation and diverse benefits program, we believe in an always-on feedback and rewards philosophy. From recurring 1:1 sessions and quarterly performance feedback to use of our Cheers for Peers peer recognition program, employees get continuous input about the value they bring to the organization.

Inclusion & Diversity. We are intentional about including diverse points of view, perspectives, experiences, backgrounds and ideas in our decision-making processes. We deeply believe that true diversity exists when we have representation of all ethnicities, genders, orientations and identities, and cultures in our workforce. Our I&D programs continue to advance those visions. The diversity of our board of directors, with women representing 33% of our board as of July 31, 2022, is an example of that vision in action. We have nine employee network groups (“ENG”s) which are employee-led groups that play a vital role in building understanding and awareness. Over 26% of our global workforce was involved in at least one ENG as of July 31, 2022. Our ENGs are provided with a budget to fund activities for their communities and to make charitable grants to organizations advancing their causes. We involve our ENGs in listening sessions with executive teams and we work in partnership to develop our annual I&D plans, because we believe involvement is critical. Our I&D philosophy is fully embedded in our talent acquisition, learning and development and rewards and recognition programs.

Environmental, Social & Governance

We recognize our duty to address environmental, social and governance (“ESG”) practices. From our Climate Commitment and our social impact programs to our Supplier Responsibility initiatives and Code of Business Conduct and Ethics, we value the opportunity to have meaningful outcomes that reinforce our intention to respect our planet, uplift our communities and advance our industry.

Environmental. We recognize climate change is a global crisis and are committed to doing our part to reduce environmental impacts. Aligned to the Climate Commitments we declared in February 2021, we remain committed to utilizing 100% renewable energy, reducing our greenhouse gas (“GHG”) emissions and working across our value chain, and with coalitions, to achieve these goals by 2030. During fiscal 2022, we conducted a comprehensive analysis of our global environmental footprint and developed Science Based Targets aligned to a warming scenario of 1.5° Celsius. We joined The Climate Pledge during fiscal 2022 demonstrating our eagerness to engage in coalitions to advocate for climate action. We are committed to being transparent about our progress over time through annual reporting.

Social. In addition to our FLEXWORK People Strategy described in the section titled “Human Capital” above, we prioritized the health and safety of our employees during the COVID-19 pandemic. Through the deployment of our Global Supplier Code of Conduct, we continued to reach across our supply chain to communicate our expectations regarding labor standards, business practices and workplace health and safety conditions. During fiscal 2022, we maintained our affiliate membership in the Responsible Business Alliance and maintained our commitment to Supplier Diversity. We value our role as a good corporate citizen and in fiscal 2022 continued to execute our social impact programs. In addition to ongoing efforts to help colleagues and communities impacted by the COVID-19 pandemic, we invested in education programs, scholarships, diversity and basic needs. We expanded our work to provide cybersecurity curriculum to schools, universities and nonprofit organizations to help youth protect their digital way of life and to prepare diverse adults for careers in cybersecurity. Employees continued to participate in our giving, matching and volunteer programs to make impacts in their local communities.

Governance. Integrity is one of our core values. Our corporate behavior and leadership practices model ethical decision making. Employees and suppliers are informed about our governance expectations through our Codes of Conduct, compliance training programs and ongoing communications. Our board of directors is governed by Corporate Governance Guidelines, which are amended from time to time to incorporate best practices in corporate governance. Reinforcing the importance of our ESG performance, the charter of the ESG and Nominating Committee of the board of directors includes the primary oversight of ESG.

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 website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission (“SEC”). We 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.

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. All trademarks, trade names, or service marks used or mentioned herein belong to their respective owners.

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. In addition, the impacts of COVID-19 and any worsening of the economic environment may exacerbate the risks described below, any of which could have a material impact on us. This situation is changing rapidly, and additional impacts may arise that we are not currently aware of.

RISK FACTOR SUMMARY

Our business is subject to numerous risks and uncertainties. These risks include, but are not limited to, the following:

- The ongoing global COVID-19 pandemic could harm our business and results of operations.
- Our business and operations have experienced 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.
- 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 may be adversely affected by unfavorable economic and market conditions and the uncertain geopolitical environment.
- Our revenue growth rate in recent periods may not be indicative of our future performance.
- 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.
- If we are unable to sell new and additional product, subscription, and support offerings to our end-customers, our future revenue and operating results will be harmed.
- We face intense competition in our market and we may lack sufficient financial or other resources to maintain or improve our competitive position.
- 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.
- Reliance on shipments at the end of the quarter could cause our revenue for the applicable period to fall below expected levels.
- Seasonality may cause fluctuations in our revenue.
- If we are unable to hire, integrate, train, retain, and motivate qualified personnel and senior management, our business could suffer.
- If we are not successful in executing our strategy to increase sales of our products, subscriptions and support offerings to new and existing enterprise end-customers, our operating results may suffer.
- 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.
- 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 or incident, misuse of our products, or risks of product liability claims could harm our reputation and adversely impact our operating results.
- False detection of applications, viruses, spyware, vulnerability exploits, data patterns, or URL categories could adversely affect our business.
- 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.
- 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 industry, our competitive position and prospects will be harmed.

- Our current research and development efforts may not produce successful products, subscriptions, or features that result in significant revenue, cost savings or other benefits in the near future, if at all.
- We may acquire other businesses, which could subject us to adverse claims or liabilities, require significant management attention, disrupt our business, adversely affect our operating results, may not result in the expected benefits of such acquisitions and may dilute stockholder value.
- 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.
- Managing the supply of our products and product components is complex. Insufficient supply and inventory would result in lost sales opportunities or delayed revenue, while excess inventory would harm our gross margins.
- 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 has disrupted or delayed our scheduled product deliveries to our end-customers, increase our costs and may result in the loss of sales and end-customers.
- The sales prices of our products, subscriptions and support offerings may decrease, which may reduce our gross profits and adversely impact our financial results.
- 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 are exposed to fluctuations in foreign currency exchange rates, which could negatively affect our financial condition and operating results.
- We are exposed to the credit and liquidity risk of some of our channel partners and end-customers, and to credit exposure in weakened markets, which could result in material losses.
- A portion of our revenue is generated by sales to government entities, which are subject to a number of challenges and risks.
- 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.
- Claims by others that we infringe their intellectual property rights could harm our business.
- 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.
- 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.
- We license technology from third parties, and our inability to maintain those licenses could harm our business.

Risks Related to Our Business and Our Industry

The ongoing global COVID-19 pandemic could harm our business and results of operations.

The novel strain of COVID-19 identified in late 2019 has spread globally, including within the United States, and has resulted in government authorities implementing numerous measures to try to contain the virus, such as travel bans and restrictions, quarantines, shelter in place orders, and shutdowns. This pandemic has negatively impacted and will likely continue to have a negative impact on, worldwide economic activity and financial markets and has impacted, and will further impact, our workforce and operations, the operations of our end-customers, and those of our respective channel partners, vendors and suppliers. In light of the uncertain and rapidly evolving situation relating to the spread of this virus and various government restrictions and guidelines, we have taken measures intended to mitigate the spread of the virus and minimize the risk to our employees, channel partners, end-customers, and the communities in which we operate. Through our FLEXWORK program, our employees may choose to work from home or in the office for a set number of days per week. Although we continue to monitor the situation and may adjust our current policies as more information and public health guidance become available, including progress made through vaccinations, these precautionary measures that we have adopted could negatively affect our customer success efforts, sales and marketing efforts, delay and lengthen our sales cycles, and create operational or other challenges, any of which could harm our business and results of operations. In addition, COVID-19 will likely continue to disrupt the operations of our end-customers and channel partners for an indefinite period of time, including as a result of travel restrictions and/or business shutdowns, all of which could negatively impact our business and results of operations, including cash flows.

The ongoing impact of COVID-19 is fluid and uncertain, but it has caused and may continue to cause various negative effects, including an inability to meet with our existing or potential end-customers; our end-customers deciding to delay or abandon their planned purchases; increased requests for delayed payment terms or product discounts by our end-customers and channel partners; us delaying, canceling, or withdrawing from user and industry conferences and other marketing events, including some of our own; and changes in the demand for our products, which has caused us to reprioritize our engineering and research and development efforts and make changes to our original offering roadmap. We have also seen supply chain challenges increase significantly, including chip and component shortages (in some cases, attributable to labor shortages), and at times we do not have sufficient inventory of certain of our products to promptly meet customer demand. As a result, we have experienced at times extended delivery time and increased costs for chips and components compared to historic levels; our demand generation activities, and our ability to close transactions with end-customers and partners may be negatively impacted; our ability to provide 24x7 worldwide support and/or replacement parts to our end-customers may be adversely affected; and it has been and, until the COVID-19 outbreak is contained and global economic activity stabilizes, will continue to be more difficult for us to forecast our operating results.

More generally, the pandemic has not only significantly and adversely increased economic and demand uncertainty, but it has caused a global economic slowdown, and continuing global economic uncertainty which could decrease technology spending and adversely affect demand for our offerings and harm our business and results of operations.

Our business and operations have experienced 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 growth and increased demand for our products and subscriptions over the last few years. As a result, our employee headcount has increased significantly, and we expect it to continue to grow over the next year. For example, from the end of fiscal 2021 to the end of fiscal 2022, our headcount increased from 10,473 to 12,561 employees. In addition, as we have grown, our number of end-customers has also increased significantly, and we have increasingly managed more complex deployments of our products and subscriptions with larger end-customers. The growth and expansion of our business and product, subscription, and support offerings places a significant strain on our management, operational, and financial resources. To manage any future growth effectively, we must continue to improve and expand our information technology and financial infrastructure, our operating and administrative systems and controls, and our ability to manage headcount, capital, and processes in an efficient manner, all of which may be more difficult to accomplish the longer that our employees must work remotely from home.

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 products, or harm our business performance and operating results.

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

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

- our ability to attract and retain new end-customers or sell additional products and subscriptions to our existing end-customers;
- the budgeting cycles, seasonal buying patterns, and purchasing practices of our end-customers;
- changes in end-customer, distributor or reseller requirements, or market needs;
- price competition;
- the timing and success of new product and service introductions by us or our competitors or any other change in the competitive landscape of our industry, including consolidation among our competitors or end-customers and strategic partnerships entered into by and between our competitors;
- changes in the mix of our products, subscriptions, and support, including changes in multi-year subscriptions and support;
- our ability to successfully and continuously expand our business domestically and internationally, particularly in the current global economic slowdown and the escalation of military conflicts such as Russia's invasion of Ukraine;
- changes in the growth rate of the enterprise security industry;
- 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;
- our obligation to repay the aggregate principal amount of the Notes as holders exercise their conversion rights under the Notes;
- 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, especially due to disruptions in our supply chain as a result of COVID-19 and the global semiconductor chip and component shortage;
- our ability to manage cloud hosting service costs and scale the cloud-based subscription offerings;
- insolvency or credit difficulties confronting our end-customers, including due to the continuing effects of COVID-19 and adversely affect their ability to purchase or pay for our products and subscription and support offerings in a timely manner or at all, 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 timely fulfill our end-customers' orders due to supply chain delays or events that impact our manufacturers or their suppliers, including due to the effects of COVID-19 and the global semiconductor chip and component shortage;
- 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;

- 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 United Kingdom's exit from the European Union ("Brexit"), Russia's invasion of Ukraine, continued hostilities in the Middle East, terrorist activities, any disruptions from COVID-19 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, including inflation, and global economic uncertainty due to the continuing effects of COVID-19.

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.

Our operating results may be adversely affected by unfavorable economic and market conditions and the uncertain geopolitical environment.

We operate globally, and as a result, our business and revenues are impacted by global economic and geopolitical conditions. The instability in the global credit markets, inflation, shortages and delays related to the global supply chain challenges, uncertainties related to the timing of the lifting of governmental restrictions to mitigate the spread of COVID-19, the current economic challenges in China, changes in public policies such as domestic and international regulations, taxes, increase in interest rates, fluctuations in foreign currency exchange rates, or international trade agreements, international trade disputes, government shutdowns, geopolitical turmoil and other disruptions to global and regional economies and markets continue to add uncertainty to global economic conditions. Military actions or armed conflict, including Russia's invasion of Ukraine and any related political or economic responses and counter-responses, and uncertainty about or changes in government and trade relationships, policies and treaties could also lead to worsening economic and market conditions and the geopolitical environment. In response to Russia's invasion of Ukraine, the United States, along with the European Union, has imposed restrictive sanctions on Russia, Russian entities, and Russian citizens ("Sanctions on Russia"). We are subject to these governmental sanctions and export controls, which may subject us to liability if we are not in full compliance with applicable laws. Any continued or further uncertainty, weakness or deterioration in economic and market conditions or the geopolitical environment could have a material and adverse impact on our business, financial condition and results of operations, including reductions in sales of our products and subscriptions, longer sales cycles, reductions in subscription or contract duration and value, slower adoption of new technologies, alterations in the spending patterns or priorities of current and prospective customers (including delaying purchasing decisions), increased costs for the chips and components to manufacture our products and increased price competition.

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

We have experienced revenue growth rates of 29.3% and 24.9% in fiscal 2022 and fiscal 2021, 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 \$1.7 billion as of July 31, 2022. 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 the downturn in the global and U.S. economy due to COVID-19, slowing demand for our products or subscriptions, increasing competition, a decrease in the growth of, or a demand shift in, our overall market, or a failure to capitalize on growth opportunities. We have also entered into a substantial amount of capital commitments for operating lease obligations and other purchase commitments. 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 or satisfying our capital commitments. In addition, we may have difficulty achieving profitability under U.S. GAAP due to share-based compensation expense and other non-cash charges. If we are unable to navigate these challenges as we encounter them, our business, financial condition, and operating results may suffer.

If we are unable to sell new and 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 portfolio with existing end-customers and create demand for our new offerings, including cloud security, AI, and analytics offerings. 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 and we may lack sufficient financial or other resources to maintain or improve our competitive position.

The industry 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 five categories:

- large companies that incorporate security features in their products, such as Cisco Systems, Inc. ("Cisco"), 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 Check Point Software Technologies Ltd. ("Check Point"), Fortinet, Inc. ("Fortinet"), and Zscaler, Inc. ("Zscaler"), that offer a mix of network and endpoint security products;
- startups and single-vertical vendors that offer independent or emerging solutions across various areas of security;
- public cloud vendors and startups that offer solutions for cloud security (private, public and hybrid cloud); and
- large and small companies, such as CrowdStrike, Inc. ("CrowdStrike"), that offer solutions for security operations and endpoint security.

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 levels of indebtedness;
- lower labor and development costs;
- newer or disruptive products or technologies;
- 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 a closed technology offering. 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 offerings only serve the needs of a portion of the enterprise security industry. Accordingly, these organizations may continue allocating their information technology budgets for legacy products and services and may not adopt our security offerings. 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 supply chain attacks) and add to the risks to our internal networks, cloud-deployed enterprise and customer-facing environments and the information they store and process. Incidences of cyberattacks and other cybersecurity breaches and incidents have increased and are likely to continue to increase. We and our third-party service providers face security threats and attacks from a variety of sources. Despite our efforts and processes to prevent breaches of our internal networks, systems and websites, our data, corporate systems, our systems and security measures, as well as those of our third-party service providers, are still vulnerable to computer viruses, break-ins, phishing attacks, ransomware attacks, or other types of attacks from outside parties, or breaches due to employee error, malfeasance, a combination of these, or otherwise. We cannot guarantee that the measures we have taken to protect our networks, systems and websites will provide adequate security. Furthermore, as a well-known provider of security solutions, we may be a more attractive target for such attacks. The conflict in Ukraine and associated activities in Ukraine and Russia may increase the risk of cyberattacks on various types of infrastructure and operations, and the United States government has warned companies to be prepared for a significant increase in Russian cyberattacks in response to the Sanctions on Russia.

A security breach or incident or an attack against our service availability suffered by us, or 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 or otherwise processed on our networks or those of our third-party service providers could be accessed, publicly disclosed, altered, lost, stolen, rendered unavailable, or otherwise used or processed without authorization, which could subject us to liability and cause us financial harm. Any actual or perceived breach of 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 significant 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, demands, 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, devices, and other measures designed to prevent actual or perceived security breaches and other 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 a fiscal quarter (including due to the effects of COVID-19), 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 offerings. 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, including in reaction to COVID-19, may make it difficult to renew or obtain visas for any highly skilled personnel that we have hired or are actively recruiting.

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

Our future performance also depends on the continued services and continuing contributions of our senior management to execute on our business plan and to identify and pursue new opportunities and product innovations. The loss of services of senior management, the decrease in the effectiveness of such services due to working remotely from home, 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, inclusion, 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. While we are taking steps to develop a more inclusive and diverse workforce, there is no guarantee that we will be able to do so. 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, subscriptions and support offerings to new and existing enterprise end-customers, our operating results may suffer.

Our growth strategy is dependent, in part, upon increasing sales of our products, services, subscriptions and offerings 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 competitors, such as Cisco and Check Point, 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, particularly during the current economic slowdown and 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 75.2% of total revenue in fiscal 2022, 73.7% of total revenue in fiscal 2021, and 68.8% of total revenue in fiscal 2020. Sales of new or renewal subscription and support contracts may decline and fluctuate as a result of a number of factors, including end-customers' level of satisfaction with our products and subscriptions (including newly integrated products and services), the prices of our products and subscriptions, the prices of products and services offered by our competitors, and reductions in our end-customers' spending levels. If our sales of new or renewal subscription and support contracts decline, our total revenue and revenue growth rate may decline, and our business will suffer. In addition, we recognize subscription and support revenue 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 or incident, misuse of our products, or risks of product liability claims could harm our reputation and adversely impact our operating results.

Because our products and subscriptions are complex, they have contained and may contain design or manufacturing defects or errors that are not detected until after their commercial release and deployment by our end-customers. For example, from time to time, certain of our end-customers have reported defects in our products related to performance, scalability, and compatibility. Additionally, defects may cause our products or subscriptions to be vulnerable to security attacks, cause them to fail to help secure networks, or temporarily interrupt end-customers' networking traffic. Because the techniques used by computer hackers to access or sabotage networks change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques and provide a solution in time to protect our end-customers' networks. In addition, due to the Russian invasion of Ukraine there could be a significant increase in Russian cyberattacks against our customers, resulting in an increased risk of a security breach of our end-customers' systems. 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, investigations, or other proceedings, 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 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 channel partners' operations may also be negatively impacted by other effects COVID-19 is having on the global economy, such as increased credit risk of end-customers and the uncertain credit markets. 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 industry, our competitive position and prospects will be harmed.

The enterprise security industry 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. We must continually change our products and expand our business strategy in response to changes in network infrastructure requirements, including the expanding use of cloud computing. For example, organizations are moving portions of their data to be managed by third parties, primarily infrastructure, platform and application service providers, and may rely on such providers' internal security measures. While we have historically been successful in developing, acquiring, and marketing new products and product enhancements that respond to technological change and evolving industry standards, we may not be able to continue to do so, and there can be no assurance that our new or future offerings will be successful or will achieve widespread market acceptance. 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. In addition, COVID-19 and the resulting increase in customer demand for work-from-home technologies and other technologies have caused us to reprioritize our engineering and R&D efforts and there can be no assurance that any product enhancements or new features will be successful or address our end-customer needs.

The technology in our portfolio 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 features and related enhancements may require us to develop new hardware architectures that involve complex, expensive, and time-consuming research and development processes. The development of our portfolio 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 features. If we experience unanticipated delays in the availability of new products, 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 features and new cloud security, AI/analytics and other offerings before knowing whether our investments will result in products, subscriptions, and features the market will accept. The success of new features depends on several factors, including appropriate new product definition, differentiation of new products, subscriptions, and features from those of our competitors, and market acceptance of these products, services and 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, including our product enhancement efforts in connection with COVID-19, 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 features that result in significant revenue, cost savings or other benefits in the near future, if at all.

Developing our products, subscriptions, features, and related enhancements is expensive. Our investments in research and development may not result in significant design improvements, marketable products, subscriptions, or features, or may result in products, subscriptions, or 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.

We may acquire other businesses, which could subject us to adverse claims or liabilities, require significant management attention, disrupt our business, adversely affect our operating results, may not result in the expected benefits of such acquisitions and may dilute stockholder value.

As part of our business strategy, we acquire and make investments in complementary companies, products, or technologies. The identification of suitable acquisition candidates is difficult, and we may not be able to complete such acquisitions on favorable terms, if at all. In addition, we may be subject to claims or liabilities assumed from an acquired company, product, or technology; acquisitions we complete could be viewed negatively by our end-customers, investors, and securities analysts; and we may incur costs and expenses necessary to address an acquired company's failure to comply with laws and governmental rules and regulations. Additionally, we may be subject to litigation or other claims in connection with the acquired company, including claims from terminated employees, customers, former stockholders, or other third parties, which may differ from or be more significant than the risks our business faces.

If we are unsuccessful at integrating past or future acquisitions in a timely manner, or the technologies and operations associated with such acquisitions, into our company, our revenue and operating results could be adversely affected. Any integration process may require significant time and resources, which may disrupt our ongoing business and divert management's attention, and we may not be able to manage the integration process successfully or in a timely manner. We may not successfully evaluate or utilize the acquired technology or personnel, realize anticipated synergies from the acquisition, or accurately forecast the financial impact of an acquisition transaction and integration of such acquisition, including accounting charges and any potential impairment of goodwill and intangible assets recognized in connection with such acquisitions.

Our completed or future acquisitions may not ultimately strengthen our competitive position or achieve our goals and business strategy. We may find that the acquired businesses, products, or technologies do not further our business strategy as we expected. Our acquisitions may be viewed negatively by our customers, financial markets, or investors. We may experience difficulty integrating the operations and personnel of the acquired business, and we may have difficulty retaining the key personnel of the acquired business. We may have difficulty integrating the acquired technologies or products with our existing product lines and we may have difficulty maintaining uniform standards, controls, procedures, and policies across diverse or expanding geographic locations.

We may have to pay cash, incur debt, or issue equity or equity-linked securities to pay for any future acquisitions, each of which could adversely affect our financial condition or the market price of our common stock. Furthermore, the sale of equity or issuance of equity-linked debt to finance any future acquisitions could result in dilution to our stockholders. See the risk factors entitled "*Our failure to raise additional capital or generate the significant capital necessary to expand our operations and invest in new products and subscriptions could reduce our ability to compete and could harm our business.*" and "*The issuance of additional stock in connection with financings, acquisitions, investments, our stock incentive plans, the conversion of our Notes or exercise of the related Warrants, or otherwise will dilute all other stockholders.*" The occurrence of any of these risks could harm our business, operating results, and financial condition.

Risks Related to our Supply Chain

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 our electronics manufacturing service provider (“EMS provider”) Flex, to manufacture our hardware 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 primarily 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 (which may increase due to the global impact of COVID-19) 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 additional, import tariffs. These tariffs, depending on their ultimate scope and how they are implemented, could negatively impact our business by increasing our costs. For example, some components that we import for final manufacturing in the United States have been impacted by these recent tariffs. As a result, our costs have increased and we have raised, and may be required to further raise, prices on our hardware products. 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 conduct due 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. COVID-19 and the global semiconductor shortage have in certain cases caused delays and challenges in obtaining components and inventory, as well as increases to freight and shipping costs, and may result in a material adverse effect on our results of operations. Any production interruptions for any reason, such as a natural disaster, epidemic or pandemic such as COVID-19, 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 would result in lost sales opportunities or delayed revenue, while excess inventory would 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. COVID-19 has made forecasting more difficult and we may experience increased challenges to our supply chain due to the unpredictability of the impacts of COVID-19. 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, including due to the recent global shortage of semiconductors, 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 has disrupted or delayed our scheduled product deliveries to our end-customers, increase our costs and may result in the loss of sales and end-customers.

Our products rely on key components, including integrated circuit components, which our manufacturing partners purchase on our behalf from a limited number of component suppliers, including sole source providers. The manufacturing operations of some of our component suppliers are geographically concentrated in Asia and elsewhere, which makes our supply chain vulnerable to regional disruptions, such as natural disasters, fire, political instability, civil unrest, a power outage, or health risks, such as epidemics and pandemics like COVID-19, and as a result have impaired, and could impair in the future, the volume of components that we are able to obtain. Lead times for components have also been adversely impacted by factors outside of our control, including COVID-19 and the recent global shortage of semiconductors. For example, we have experienced, and could continue to experience, increased difficulties in obtaining a sufficient amount of materials in the semiconductor market, which could reduce our flexibility to react to product mix changes and unforeseen orders. In addition, we have experienced increased costs because of these shortages.

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. Because we do not have, for the most part, volume purchase contracts with our 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 would result in lost sales opportunities and damage to customer relationships, which would adversely affect our business and operating results.

Risks Related to Sales of our Products, Subscriptions and Support Offerings

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

The sales prices for our products, subscriptions and support offerings may decline for a variety of reasons, including competitive pricing pressures, discounts, a change in our mix of products, subscriptions and support offerings, anticipation of the introduction of new products, subscriptions or support offerings, or promotional programs or pricing pressures as a result of the economic downturn resulting from COVID-19. 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, subscriptions and support offerings 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 could 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 products, subscriptions and support 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, subscriptions and support offerings 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, health risks such as epidemics and pandemics like COVID-19, macroeconomic challenges in Europe, terrorist activities, Russia's invasion of Ukraine, 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, such as the recently imposed Sanctions on Russia, or foreign countries in response to regulatory changes adopted by the current administration;
- risks associated with trade restrictions and foreign legal requirements, including the importation, certification, and localization of our products required in foreign countries;
- greater risk of a failure of foreign employees, channel partners, distributors, and resellers to comply with both U.S. and foreign laws, including antitrust regulations, the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, U.S. or foreign sanctions regimes and export or import control laws, and any trade regulations ensuring fair trade practices, which non-compliance could include increased costs;
- heightened risk of unfair or corrupt business practices in certain geographies and of improper or fraudulent sales arrangements;
- increased expenses incurred in establishing and maintaining office space and equipment for our international operations;
- management communication and integration problems resulting from cultural and geographic dispersion; and
- fluctuations in exchange rates between the U.S. dollar and foreign currencies in markets where we do business and related impact on sales cycles.

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

Further, we are subject to risks associated with changes in economic and political conditions in countries in which we operate or sell our products and subscriptions. For instance, Brexit creates an uncertain political and economic environment in the United Kingdom (“U.K.”) and across European Union (“E.U.”) member states for the foreseeable future. On January 31, 2020 the U.K. left the E.U. and the EU/UK Trade and Cooperation Agreement came into force on January 1, 2021. Our financial condition and operating results 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 foreign 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, 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 products 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, 2022, the total notional amount of our outstanding foreign currency forward contracts was \$856.9 million. For more information on our hedging transactions, refer to Note 6. 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.

We are exposed to the credit and liquidity risk of some of our channel partners and end-customers, and to credit exposure in weakened markets, which could result in material losses.

Most of our sales are made on an open credit basis. Beyond our open credit arrangements, we have also experienced demands for customer financing due to COVID-19 and our competitors' offerings. The majority of these demands are currently facilitated by leasing and other financing arrangements provided by our distributors and resellers. To respond to this demand, our customer financing activities may increase in the future. We also provide financings to certain end-customers. We monitor customer payment capability in granting such financing arrangements, seek to limit such open credit to amounts we believe the end-customers can pay and maintain reserves we believe are adequate to cover exposure for doubtful accounts to mitigate credit risks of these end-customers. However, there can be no assurance that these programs will be effective in reducing our credit risks.

We believe customer financing is a competitive factor in obtaining business. The loan financing arrangements provided by our distributors and resellers may include not only financing the acquisition of our products and services but also providing additional funds for other costs associated with network installation and integration of our products and services.

Our exposure to the credit risks relating to the financing activities described above may increase if our customers are adversely affected by a global economic downturn or periods of economic uncertainty. Although we have programs in place with our distributors and resellers that are designed to monitor and mitigate these risks, we cannot guarantee these programs will be effective in reducing the 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.

In the past, we have experienced non-material losses due to bankruptcies among customers. If these losses increase due to COVID-19 or global economic conditions, they could harm our business and financial condition. A material portion of our sales is derived through our distributors.

For fiscal 2022, three distributors individually represented 10% or more of our total revenue, and in the aggregate represented 53.6% of our total revenue. As of July 31, 2022, three distributors individually represented 10% or more of our gross accounts receivable, and in the aggregate represented 47.7% of our gross accounts receivable.

Additionally, to the degree that turmoil in the credit markets makes it more difficult for some customers to obtain financing, those customers' ability to pay could be adversely impacted, which in turn could have a material adverse impact on our business, operating results, and financial condition.

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

Sales to government entities are subject to a number of risks. Selling to government entities can be highly competitive, expensive, and time-consuming, often requiring significant upfront time and expense without any assurance that these efforts will generate a sale. The substantial majority of our sales to date to government entities have been made indirectly through our channel partners. Government certification requirements for products and subscriptions like ours may change, thereby restricting our ability to sell into the federal government sector until we have attained the revised certification. If our products and subscriptions are late in achieving or fail to achieve compliance with these certifications and standards, or our competitors achieve compliance with these certifications and standards, we may be disqualified from selling our products, subscriptions and support offerings 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, subscriptions and support offerings 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, subscriptions and support offerings. 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, subscriptions and support offerings, 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, subscriptions and support offerings 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. While we have been able to meet increased demand for support services in fiscal 2022, failure to do so in the future could have a material adverse effect on our business.

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.

Risks Related to Intellectual Property and Technology Licensing

Claims by others that we infringe their intellectual property 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 rights. In addition, non-practicing entities also frequently bring claims of infringement of intellectual property rights. Third parties are asserting, have asserted and may in the future assert claims of infringement of intellectual property rights against us.

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, products, subscriptions and services. As we expand our footprint, both in our platforms, products, subscriptions and services and geographically, more overlaps occur and we may face more infringement claims both in the United States and abroad.

While we have been increasing 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 has involved and will likely continue to involve patent holding companies or other adverse patent owners who have no relevant product revenue and against whom our own patents may therefore provide little or no deterrence or protection. In addition, we have not registered our trademarks in all of our geographic markets and failure to secure those registrations could adversely affect our ability to enforce and defend our trademark rights. Any claim of infringement by a third party, even those without merit, could cause us to incur substantial costs defending against the claim, could distract our management from our business, and could require us to cease use of such intellectual property. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. A successful claimant could secure a judgment, or we may agree to a settlement that prevents us from distributing certain products or performing certain services or that requires us to pay substantial damages, royalties, or other fees. Any of these events could seriously harm our business, financial condition, and operating results.

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

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

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

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

Our products and subscriptions contain software modules licensed to us by third-party authors under “open source” licenses. Some open source licenses contain requirements that we make available applicable source code for modifications or derivative works we create based upon the type of open source software we use. If we combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release the source code of our proprietary software to the public. This would allow our competitors to create similar products or subscriptions with lower development effort and time and ultimately could result in a loss of product sales for us.

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

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

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

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

Risks Related to Privacy and Data Protection

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 laws and regulations relating to privacy, data protection and security 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 (“E.U. GDPR”), which became effective in May 2018, imposes more stringent data protection requirements, provides for greater penalties for noncompliance than E.U. laws that previously applied (up to the greater of €20 million or 4% of the total worldwide annual turnover), and confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies and obtain compensation for damages resulting from violations of the E.U. GDPR. The E.U. GDPR requires, among other things, that personal data only be transferred outside of the E.U. to the United States and other jurisdictions that the European Commission has not yet recognized as having “adequate” data protection laws (a “third country”), where a data transfer mechanism under the E.U. GDPR has been put in place. Historically, we have relied on the E.U.-U.S. and Swiss-U.S. Privacy Shield programs, and the use of model contractual clauses approved by the E.U. Commission, to legitimize these transfers (also referred to as standard contractual clauses or SCCs). In July 2020, the Court of Justice of the European Union in its “Schrems II” decision invalidated the E.U.-U.S. Privacy Shield for purposes of transfers to the U.S. and imposed a requirement for companies to carry out an assessment of the laws and practices governing access to personal data in the third country to ensure an essentially equivalent level of data protection to that afforded in the E.U. Though we no longer rely on the Privacy Shield programs and instead employ model contractual clauses for personal data transfers, the Schrems II decision raises questions as to implications under European and UK law and adequate data protection in the United States. Among other effects, we may experience additional costs associated with increased compliance burdens, putting in place any additional data transfer mechanisms and new contract negotiations with third parties that aid in processing data on our behalf. We may experience reluctance or refusal by current or prospective customers in the European Economic Area (“EEA”), Switzerland, and the U.K. (collectively, “Europe”) to use our products, and we may find it necessary or desirable to make further changes to our handling of personal data of residents of Europe. The regulatory environment applicable to the handling of European residents’ personal data, and our actions taken in response, may cause us to assume additional liabilities or incur additional costs and could result in our business, operating results and financial condition being harmed. Additionally, we and our customers may face risk of enforcement actions by data protection authorities in Europe relating to personal data transfers to us and by us from Europe. Any such enforcement actions could result in substantial costs and diversion of resources, distract management and technical personnel and negatively affect our business, operating results, and financial condition.

Following the withdrawal of the U.K. from the E.U. (i.e., Brexit), and the expiry of the Brexit transition period, which ended on December 31, 2020, the E.U. GDPR has been implemented in the U.K. (as the “U.K. GDPR”). The U.K. GDPR sits alongside the U.K. Data Protection Act 2018, which implements certain derogations in the E.U. GDPR into English law. The requirements of the U.K. GDPR, which are (at this time) largely aligned with those under the E.U. GDPR, may lead to similar compliance and operational costs with potential fines of up to £17.5 million or 4% of total worldwide annual turnover.

In the United States, companies that do business in California are subject to the California Consumer Privacy Act (“CCPA”), which requires, among other things, covered companies to provide new disclosures to California consumers, afford such consumers certain rights regarding their personal information, and also affords a private right of action to individuals affected by a data breach, if the breach was caused by a lack of reasonable security. The enforcement of the CCPA by the California Attorney General commenced on July 1, 2020. The CCPA has been amended on multiple occasions and the California Attorney General has issued initial and revised regulations that also govern the CCPA. It remains unclear how this legislation will be interpreted and enforced. 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 for compliance. Moreover, additional state privacy laws have been passed and will require potentially substantial efforts to obtain compliance. This includes the California Privacy Rights Act (“CPRA”) which was approved by California voters, and significantly modifies the CCPA. The U.S. federal government also is contemplating privacy legislation.

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. Additionally, the Federal Trade Commission and many state attorneys general are interpreting federal and state consumer protection laws to impose standards for the online collection, use, dissemination, and security of data. Further, we may be or become subject to data localization laws mandating that data collected in a foreign country be processed and stored within that country. Each of these privacy, security, and data protection laws and regulations, and any other such changes or new laws or regulations, could impose significant limitations, or require changes to our business model or practices or growth strategy, which may increase our compliance expenses and make our business more costly or less efficient to conduct.

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

Risks Related to Operations Outside the United States

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

As a result of various of our acquisitions, including Cyber Secdo Ltd. (“Secdo”), PureSec Ltd. (“PureSec”) and Twistlock Ltd. (“Twistlock”), we have offices 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. The effects of 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.

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

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

In addition, various countries regulate the import of certain encryption technology, including through import permit and license requirements, and have enacted laws that could limit our ability to distribute our products or could limit our end-customers' ability to implement our products in those countries. Changes in our products or changes in export and import regulations may create delays in the introduction of our products into international markets, prevent our end-customers with international operations from deploying our products globally or, in some cases, prevent or delay the export or import of our products to certain countries, governments, or persons altogether. Any change in export or import regulations, economic sanctions, such as the Sanctions on Russia, 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.

Tax, Accounting, Compliance and Regulatory Risks

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, or interpretations of, domestic and international tax laws that negatively impact the structure, 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 or benefit from 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 on our consolidated financial statements and may materially affect our financial results in the period or periods for which such determination is made.

In addition, our future income tax obligations could be adversely affected by changes in, or interpretations of, tax laws in the United States or in other jurisdictions in which we operate.

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 consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported on 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. In general, if our estimates, judgments or assumptions relating to our critical accounting policies change or if actual circumstances differ from our estimates, judgments or assumptions, including uncertainty in the current economic environment due to COVID-19, 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.

Our reputation and/or business could be negatively impacted by ESG matters and/or our reporting of such matters.

There is an increasing focus from regulators, certain investors, and other stakeholders concerning environmental, social, and governance (“ESG”) matters, both in the United States and internationally. We communicate certain ESG-related initiatives, goals, and/or commitments regarding environmental matters, diversity, responsible sourcing and social investments, and other matters in our annual ESG Report, on our website, in our filings with the SEC, and elsewhere. These initiatives, goals, or commitments could be difficult to achieve and costly to implement. We could fail to achieve, or be perceived to fail to achieve, our ESG-related initiatives, goals, or commitments. In addition, we could be criticized for the timing, scope or nature of these initiatives, goals, or commitments, or for any revisions to them. To the extent that our required and voluntary disclosures about ESG matters increase, we could be criticized for the accuracy, adequacy, or completeness of such disclosures. Our actual or perceived failure to achieve our ESG-related initiatives, goals, or commitments could negatively impact our reputation, result in ESG-focused investors not purchasing and holding our stock, or otherwise materially harm our business.

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

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

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

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

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

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

Risks Related to Our Notes

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

In July 2018 we issued our 2023 Notes (the “2023 Notes”) and in June 2020 we issued our 2025 Notes (the “2025 Notes,” together with the “2023 Notes,” the “Notes”). We will need to make cash payments (1) if holders of our Notes require us to repurchase all or a portion of their Notes upon the occurrence of a fundamental change (e.g., a change of control of Palo Alto Networks, Inc.) before the maturity date, (2) upon conversion of our Notes, or (3) to repay our Notes in cash at their maturity, unless earlier converted or repurchased. Effective August 1, 2022 through October 31, 2022, all of the 2023 Notes and 2025 Notes are convertible. If all of the Noteholders decided to convert their Notes, we would be obligated to pay the \$3.7 billion principal amount of the Notes in cash. Under the terms of the Notes, we also have the option to settle the amount of our conversion obligation in excess of the aggregate principal amount of the Notes in cash or shares of our common stock. If our cash provided by operating activities, together with our existing cash, cash equivalents and investments, and existing sources of financing, are inadequate to satisfy these obligations, we will need to obtain third-party financing, which may not be available to us on commercially reasonable terms or at all, to meet these payment obligations.

In addition, our ability to repurchase or to pay cash upon conversion of our Notes may be limited by law, regulatory authority or agreements governing our future indebtedness. Our failure to repurchase our Notes at a time when the repurchase is required by the applicable indenture governing such Notes or to pay cash upon conversion of such Notes as required by the applicable indenture would constitute a default under the indenture. A default under the applicable 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 our Notes or to pay cash upon conversion of our Notes.

We may still incur substantially more debt or take other actions that would diminish our ability to make payments on our 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 indenture governing our 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 our Notes that could have the effect of diminishing our ability to make payments on our 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 our Notes only to the extent any such indebtedness or credit facility is not repaid or does not mature while our Notes are outstanding.

Risks Related to Our Common Stock

Our actual operating results may differ significantly from our guidance.

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

Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic, and competitive uncertainties and contingencies, many of which are beyond our control, such as COVID-19, 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”) in July 2012. The reported high and low sales prices of our common stock during the last 12 months have ranged from \$367.21 to \$640.90 per share, as measured through August 22, 2022. 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, such as COVID-19;
- 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 our 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 our Notes;
- departures of key personnel; or
- economic uncertainty around the world.

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

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

In connection with the sale of our 2023 Notes and 2025 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 for our 2023 Notes and 2025 Notes are expected generally to reduce the potential dilution to our common stock upon any conversion of our Notes and/or offset any cash payments we are required to make in excess of the principal amount of any such converted Notes. 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 outstanding Notes (and are likely to do so during any applicable observation period related to a conversion of our Notes). This activity could also cause or avoid an increase or a decrease in the market price of our common stock or our Notes, which could affect a note holder’s ability to convert its Notes and, to the extent the activity occurs during any observation period related to a conversion of our Notes, it could affect the amount and value of the consideration that the note holder will receive upon conversion of our Notes.

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 our 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 related to each such series of the Notes, 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 cannot guarantee that our share repurchase program will be fully consummated, or that it will enhance shareholder value, and share repurchases could affect the price of our common stock.

As of July 31, 2022, we had \$85.0 million available under our share repurchase program which will expire on December 31, 2022. Such share repurchase program may be suspended or discontinued by the Company at any time without prior notice. Although our board of directors has authorized a share repurchase program, we are not obligated to repurchase any specific dollar amount or to acquire any specific number of shares under the program. The share repurchase program could affect the price of our common stock, increase volatility and diminish our cash reserves. In addition, the program may be suspended or terminated at any time, which may result in a decrease in the price of our common stock.

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.

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

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

- establish that our board of directors is divided into three classes, Class I, Class II and Class III, with three-year staggered terms;
- authorize our board of directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval;
- provide our board of directors with the exclusive right to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director;
- prohibit our stockholders from taking action by written consent;

- specify that special meetings of our stockholders may be called only by the chairman of our board of directors, our president, our secretary, or a majority vote of our board of directors;
- require the affirmative vote of holders of at least 66 2/3% of the voting power of all of the then outstanding shares of the voting stock, voting together as a single class, to amend the provisions of our amended and restated certificate of incorporation relating to the issuance of preferred stock and management of our business or our amended and restated bylaws;
- authorize our board of directors to amend our bylaws by majority vote; and
- establish advance notice procedures with which our stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for our stockholders to replace members of our board of directors, which is responsible for appointing the members of management. In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time. Additionally, certain provisions contained in the indenture governing our 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 indenture governing our 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.

General Risk Factors

Our business is subject to the risks of earthquakes, fire, power outages, floods, health risks 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, epidemics and pandemics such as COVID-19, 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.

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 portfolio, 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. Any conversion of the outstanding 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 exercise of the related Warrants, or otherwise will dilute all other stockholders.*” The holders of our Notes have priority over holders of our common stock, and if we engage in future debt financings, the holders of such additional debt would also have priority over the holders of our common stock. Current and future indebtedness may also contain terms that, among other things, restrict our ability to incur additional indebtedness. We may also be required to take other actions that would otherwise be in the interests of the debt holders and would require us to maintain specified liquidity or other ratios, any of which could harm our business, operating results, and financial condition. We may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly impaired, and our business may be adversely affected.

We 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 2022 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.

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 space for personnel in Israel. 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 11. Leases in Part II, Item 8 of this Annual Report on Form 10-K for more information on our operating leases. Additionally, we own 10.4 acres of land adjacent to our headquarters in Santa Clara, California, which we intend to develop to accommodate future expansion, the speed of which development has been slowed due to the current environment.

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 12. Commitments and Contingencies 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.

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, is traded on the Nasdaq Global Select Market under the symbol "PANW." Prior to October 22, 2021, our common stock traded on the New York Stock Exchange ("NYSE") under the symbol "PANW."

Holders of Record

As of August 22, 2022, there were 355 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.

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 Sales of Unregistered Equity Securities

During the three months ended July 31, 2022, we issued a total of 35,004 shares of our unregistered common stock pursuant to post-closing obligations in connection with our previous acquisitions of The Crypsis Group, Gamma Networks, Inc., and Sinefa Group, Inc. (the "Transactions").

The Transactions did not involve any underwriters, any underwriting discounts or commissions, or any public offering. The issuances of the securities pursuant to the Transactions were exempt from registration under the Securities Act of 1933, as amended (the "Act") by virtue of Section 4(a)(2) of the Act and Rule 506 of Regulation D promulgated thereunder.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The following table summarizes stock repurchases during the three months ended July 31, 2022 (in millions, except per share amounts):

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽¹⁾	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs ⁽¹⁾
May 1, 2022 to May 31, 2022 ⁽¹⁾⁽²⁾	0.0	\$ 436.37	—	\$ 450.0
June 1, 2022 to June 30, 2022 ⁽¹⁾⁽²⁾	0.5	\$ 482.86	0.5	\$ 196.3
July 1, 2022 to July 31, 2022 ⁽¹⁾⁽²⁾	0.3	\$ 486.05	0.3	\$ 85.0
Total	0.8	\$ 483.50	0.8	

⁽¹⁾ On February 26, 2019, we announced that our board of directors authorized a \$1.0 billion share repurchase program, which is funded from available working capital. In December 2020 and August 2021, we announced additional \$700.0 million and \$676.1 million increases to this share repurchase program, respectively, bringing the total authorization to \$2.4 billion, with \$85.0 million remaining as of July 31, 2022. The expiration date of this repurchase authorization was extended to December 31, 2022, and our repurchase program may be suspended or discontinued at any time. Repurchases under our program are to be made at management's discretion 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.

⁽²⁾ Includes shares of restricted common stock delivered by certain employees upon vesting of equity awards to satisfy tax withholding requirements. The number of shares delivered by these employees to satisfy tax withholding requirements during the period was not significant.

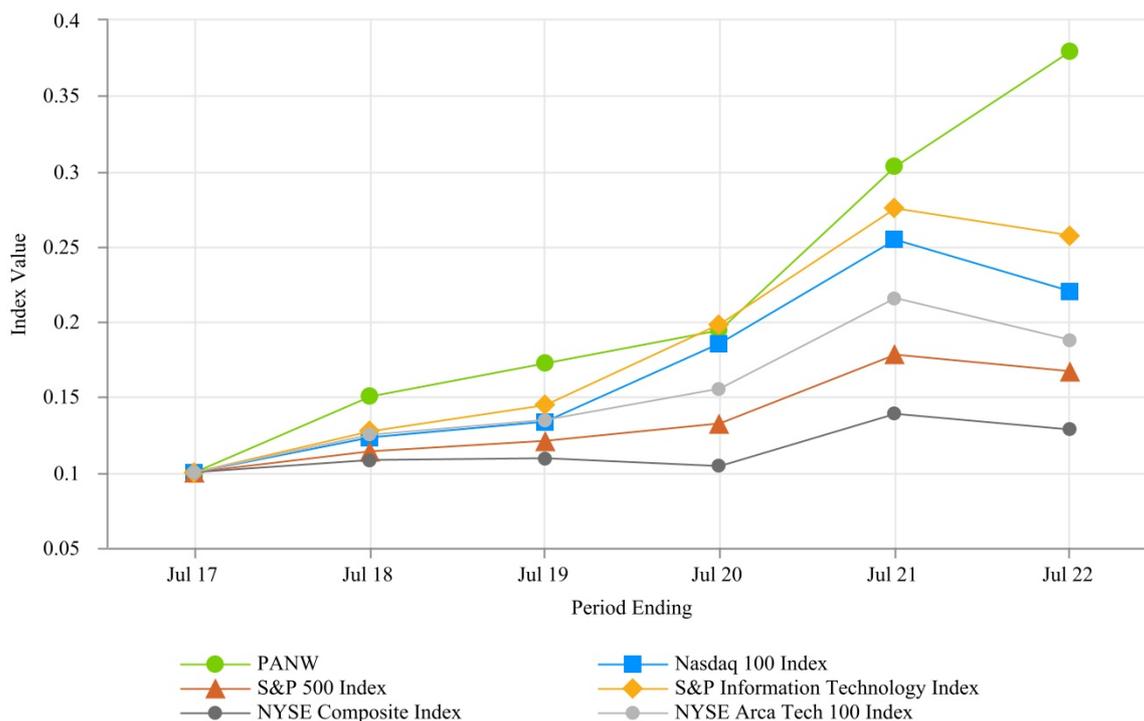
Stock Price Performance Graph

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.

Historically, we have compared the cumulative total return on our common stock with that of the NYSE Composite Index and the NYSE Arca Tech 100 Index. As a result of the change in our listing from the NYSE to Nasdaq in October 2021, we have added the Nasdaq 100 Index, the Standard & Poor’s 500 Index and the Standard & Poor’s Information Technology Index to the indexes that we have historically used.

This performance graph compares the cumulative total return on our common stock with that of the Nasdaq 100 Index, the Standard & Poor’s 500 Index, the Standard & Poor Information Technology Index, the NYSE Composite Index and the NYSE Arca Tech 100 Index for the five years ended July 31, 2022. This performance graph assumes \$100 was invested on July 31, 2017, in each of the common stock of Palo Alto Networks, Inc., the Nasdaq 100 Index, the Standard & Poor’s 500 Index, the Standard & Poor’s Information Technology Index, 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.

Palo Alto Networks, Inc. Comparison of Total Return Performance



Company/Index	7/31/2017	7/31/2018	7/31/2019	7/31/2020	7/31/2021	7/31/2022
Palo Alto Networks, Inc.	\$ 100.00	\$ 150.45	\$ 171.91	\$ 194.20	\$ 302.82	\$ 378.74
Nasdaq 100 Index	\$ 100.00	\$ 122.99	\$ 133.48	\$ 185.46	\$ 254.41	\$ 220.19
S&P 500 Index	\$ 100.00	\$ 114.01	\$ 120.65	\$ 132.42	\$ 177.92	\$ 167.20
S&P Information Technology Index	\$ 100.00	\$ 126.83	\$ 144.57	\$ 198.12	\$ 274.74	\$ 257.30
NYSE Composite Index	\$ 100.00	\$ 108.32	\$ 109.18	\$ 104.16	\$ 138.73	\$ 128.08
NYSE Arca Tech 100 Index	\$ 100.00	\$ 124.87	\$ 134.35	\$ 155.18	\$ 215.23	\$ 187.52

ITEM 6. [RESERVED]

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 2022 to fiscal 2021. For discussion and analysis related to our financial results comparing fiscal 2021 to 2020, refer to Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K for fiscal 2021, which was filed with the Securities and Exchange Commission on September 3, 2021.
- **Liquidity and Capital Resources.** An analysis of changes on 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, 2022, 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 empower enterprises, organizations, service providers, and government entities to protect themselves against today's most sophisticated cyber threats. Our cybersecurity platforms and services help secure enterprise users, networks, clouds, and endpoints by delivering comprehensive cybersecurity backed by industry leading artificial intelligence and automation. We are a leading provider of zero trust solutions that start with the next-generation of zero trust network access to secure remote workforces and extend into securing all users, applications and infrastructure with zero trust principles. Our security solutions are designed to reduce customers' total cost of ownership by improving operational efficiency and eliminating the need for siloed point products. Our company focuses on delivering value in five fundamental areas:

Network Security:

- Our network security platform, which includes our ML-Powered Next-Generation Firewalls, available in a number of form factors, including physical, virtual, and containerized appliances, as well as a cloud-delivered service, has been a leader in the industry for ten consecutive years. Our network security platform also includes our Cloud-Delivered Security Services, such as Threat Prevention, Advanced Threat Prevention, WildFire®, Advanced URL Filtering, DNS Security, IoT Security, GlobalProtect™, SD-WAN, Enterprise Data Loss Prevention ("Enterprise DLP"), SaaS Security API and SaaS Security Inline. Through these add-on security services, our customers are able to secure their content, applications, users, and devices across our network security platform as well as the Prisma® and Cortex® product lines. Panorama™, our network security management solution, available as hardware or virtual machine, can centrally manage our network security platform irrespective of form factor, location, or scale.

Secure Access Service Edge:

- Prisma Access is our next-generation Zero Trust Network Access (“ZTNA”) platform that provides secure network access for all employees with unified policy management and continuous threat inspection. We have recently introduced ZTNA 2.0, which addresses major shortcomings in the first-generation ZTNA products in the industry (which we refer to as ZTNA 1.0). Prisma Access delivers granular least-privileged access along with continuous trust verification and security inspection and protects security for all applications and data across the enterprise infrastructure. Prisma Access, when combined with Prisma SD-WAN, provides a comprehensive single-vendor Secure Access Service Edge (“SASE”) offering that is used to secure remote workforces and enable the cloud-delivered branch.

Cloud Security:

- We enable cloud native security through our Prisma Cloud platform. As a comprehensive Cloud Native Application Protection Platform (“CNAPP”), Prisma Cloud secures hybrid and multi-cloud environments for applications, data, and the entire cloud native technology stack across the full development lifecycle; from code to runtime. For inline network security on multi and hybrid-cloud environments, we also offer our VM-Series and CN-Series Firewall offerings.

Security Operations:

- We deliver the next generation of endpoint security, security analytics and security automation solutions through our Cortex portfolio. These include our industry-leading extended detection and response platform Cortex XDR[®] to prevent, detect, and respond to complex cybersecurity attacks, Cortex XSOAR[®] for security orchestration, automation, and response (“SOAR”), Cortex Xpanse[®] for attack surface management (“ASM”) and Cortex Data Lake allowing our customers to collect and analyze large amounts of context-rich data across endpoints, networks, and clouds. These products are delivered as software or SaaS subscriptions.

Threat Intelligence and Security Consulting (Unit 42):

- We enable security teams with up-to-date threat intelligence and deep cybersecurity expertise before, during and after attacks through our Unit 42 threat research and security consulting team. Unit 42 offers incident response, risk management, board advisory and proactive cybersecurity assessment services.

For fiscal 2022 and 2021, total revenue was \$5.5 billion and \$4.3 billion, respectively, representing year-over-year growth of 29.3%. Our growth reflects the increased adoption of our portfolio, which consists of product, subscriptions, and support. We believe our portfolio will enable us to benefit from recurring revenues and new revenues as we continue to grow our end-customer base. As of July 31, 2022, we had end-customers in over 180 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 almost all of the Fortune 100 companies and a majority of the Global 2000 companies in the world. We maintain a field sales force that works closely with our channel partners in developing sales opportunities. We primarily 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 \$1.4 billion or 24.8% of total revenue for fiscal 2022, representing year-over-year growth of 21.7%. Product revenue is primarily generated from sales of our appliances, primarily our ML-Powered Next-Generation Firewall, which is available in a number of form factors, including as physical, virtual, and containerized appliances. Our ML-Powered Next-Generation Firewall incorporates our PAN-OS operating system, which provides a consistent set of capabilities across our entire network security product line. Our products are designed for different performance requirements throughout an organization, ranging from our PA-410, which is designed for small organizations and remote or branch offices, to our top-of-the-line PA-7080, which is designed for large-scale data centers and service provider use. 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, and in our CN-Series container firewalls, which secure container environments and traffic.

Our subscription and support revenue grew to \$4.1 billion or 75.2% of total revenue for fiscal 2022, representing year-over-year growth of 32.0%. Our subscriptions provide our end-customers with near real-time access to the latest antivirus, intrusion prevention, web filtering, modern malware prevention, data loss prevention, and cloud access security broker capabilities across the network, endpoints, and the cloud. When end-customers purchase our physical, virtual, or container firewall appliances, or certain cloud offerings, 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 also offer professional services, including incident response, risk management, and digital forensic services.

We continue to invest in innovation as we evolve and further extend the capabilities of our portfolio, as we believe that innovation and timely development of new features and products are essential to meeting the needs of our end-customers and improving our competitive position. During fiscal 2022, we introduced several new offerings, including: Prisma Cloud 3.0, Prisma Access 3.0, AIOps for NGFW, PAN-OS 10.2, and Cloud NGFW for AWS.

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 portfolio 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.

Impact of COVID-19 and Other Macroeconomic Factors on Our Business

We are actively monitoring, evaluating, and responding to developments relating to COVID-19, which has resulted in and is expected to continue to result in significant global, social, and business disruption. While we instituted a global work-from-home policy beginning in March 2020, which has been modified to provide employees with the choice to work in our offices for a set number of days per week or completely remotely, we did not experience significant disruption in our work operations during fiscal 2022. We will continue to actively monitor the situation, including progress made through vaccinations, and we will make further changes to our business operations as may be required by federal, state, or local authorities or that we determine are in the best interests of our employees, end-customers, partners, suppliers, and stockholders. Our focus remains on the safety of our employees, and we strive to protect the health and well-being of the communities in which we operate, in part, by providing technology to our employees, end-customers, and partners to help them do their best work while working remotely.

COVID-19 has affected our end-customers’ spending and could lead them to delay or defer purchasing decisions, and lengthen sales cycles and payment terms, which could materially adversely impact our business, results of operations, and overall financial performance. The extent of the impact of COVID-19 on our operational and financial performance will depend on developments, including the duration and spread of the virus and its variants, impact on our end-customers’ spending, volume of sales and length of our sales cycles, impact on our partners, suppliers, and employees, actions that may be taken by governmental authorities, and other factors identified in Part I, Item 1A “Risk Factors” in this Form 10-K. The global supply chain and the semiconductor industry are experiencing significant challenges. We have seen supply chain challenges increase, including chip and component shortages, which have, in certain cases, caused delays for us in acquiring chips, components and inventory and have resulted in increased costs as compared to historic levels. While we incurred increased costs and experienced increased lead time for certain product deliveries to our end-customers, we continue to work to minimize the effects from supply chain challenges.

In addition, our overall performance depends in part on worldwide economic and geopolitical conditions. Worsening economic conditions, including inflation, higher interest rates, fluctuations in foreign exchange rates and other changes in economic conditions, may adversely affect our financial performance.

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.”

	July 31,			
	2022	2021		
(in millions)				
Total deferred revenue	\$	6,994.0	\$	5,024.0
Cash, cash equivalents, and investments	\$	4,686.4	\$	3,789.4

	Year Ended July 31,					
	2022	2021	2020			
(dollars in millions)						
Total revenue	\$	5,501.5	\$	4,256.1	\$	3,408.4
Total revenue year-over-year percentage increase		29.3 %		24.9 %		17.5 %
Gross margin		68.8 %		70.0 %		70.7 %
Operating loss	\$	(188.8)	\$	(304.1)	\$	(179.0)
Operating margin		(3.4)%		(7.1)%		(5.3)%
Billings	\$	7,471.5	\$	5,452.2	\$	4,301.7
Billings year-over-year percentage increase		37.0 %		26.7 %		23.3 %
Cash flow provided by operating activities	\$	1,984.7	\$	1,503.0	\$	1,035.7
Free cash flow (non-GAAP)	\$	1,791.9	\$	1,387.0	\$	821.3

- **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 metric used by management to manage our business. We believe billings provides investors with an important indicator of the health and visibility of our business because it includes subscription and support revenue, which is recognized ratably over the contractual service period, and product revenue, which is recognized at the time of shipment, provided that all other conditions for revenue recognition have been met. We consider billings to be a useful metric for management and investors, particularly if we continue to experience increased sales of subscriptions and strong renewal rates for subscription and support offerings, and as we monitor our near-term cash flows. While we believe that billings provides useful information to investors and others in understanding and evaluating our operating results in the same manner as our management, it is important to note that other companies, including companies in our industry, may not use billings, may calculate billings differently, may have different billing frequencies, or may use other financial measures to evaluate their performance, all of which could reduce the usefulness of billings as a comparative measure. We calculate billings in the following manner:

	Year Ended July 31,					
	2022	2021	2020			
(in millions)						
Billings:						
Total revenue	\$	5,501.5	\$	4,256.1	\$	3,408.4
Add: change in total deferred revenue, net of acquired deferred revenue		1,970.0		1,196.1		893.3
Billings	\$	7,471.5	\$	5,452.2	\$	4,301.7

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

	Year Ended July 31,		
	2022	2021	2020
	(in millions)		
Free cash flow (non-GAAP):			
Net cash provided by operating activities	\$ 1,984.7	\$ 1,503.0	\$ 1,035.7
Less: purchases of property, equipment, and other assets	192.8	116.0	214.4
Free cash flow (non-GAAP)	<u>\$ 1,791.9</u>	<u>\$ 1,387.0</u>	<u>\$ 821.3</u>
Net cash provided by (used in) investing activities	<u>\$ (933.4)</u>	<u>\$ (1,480.6)</u>	<u>\$ 288.0</u>
Net cash provided by (used in) financing activities	<u>\$ (806.6)</u>	<u>\$ (1,104.0)</u>	<u>\$ 673.0</u>

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,					
	2022		2021		2020	
	Amount	% of Revenue	Amount	% of Revenue	Amount	% of Revenue
	(dollars in millions)					
Revenue:						
Product	\$ 1,363.1	24.8 %	\$ 1,120.3	26.3 %	\$ 1,064.2	31.2 %
Subscription and support	4,138.4	75.2 %	3,135.8	73.7 %	2,344.2	68.8 %
Total revenue	5,501.5	100.0 %	4,256.1	100.0 %	3,408.4	100.0 %
Cost of revenue:						
Product	455.5	8.3 %	308.5	7.2 %	294.4	8.6 %
Subscription and support	1,263.2	22.9 %	966.4	22.8 %	705.1	20.7 %
Total cost of revenue ⁽¹⁾	1,718.7	31.2 %	1,274.9	30.0 %	999.5	29.3 %
Total gross profit	3,782.8	68.8 %	2,981.2	70.0 %	2,408.9	70.7 %
Operating expenses:						
Research and development	1,417.7	25.8 %	1,140.4	26.8 %	768.1	22.5 %
Sales and marketing	2,148.9	39.0 %	1,753.8	41.1 %	1,520.2	44.7 %
General and administrative	405.0	7.4 %	391.1	9.2 %	299.6	8.8 %
Total operating expenses ⁽¹⁾	3,971.6	72.2 %	3,285.3	77.1 %	2,587.9	76.0 %
Operating loss	(188.8)	(3.4)%	(304.1)	(7.1)%	(179.0)	(5.3)%
Interest expense	(27.4)	(0.5)%	(163.3)	(3.8)%	(88.7)	(2.6)%
Other income, net	9.0	0.1 %	2.4	0.0 %	35.9	1.1 %
Loss before income taxes	(207.2)	(3.8)%	(465.0)	(10.9)%	(231.8)	(6.8)%
Provision for income taxes	59.8	1.1 %	33.9	0.8 %	35.2	1.0 %
Net loss	\$ (267.0)	(4.9)%	\$ (498.9)	(11.7)%	\$ (267.0)	(7.8)%

⁽¹⁾ Includes share-based compensation as follows:

	Year Ended July 31,		
	2022	2021	2020
	(in millions)		
Cost of product revenue	\$ 9.3	\$ 6.2	\$ 5.7
Cost of subscription and support revenue	110.2	93.0	77.7
Research and development	471.1	428.9	274.6
Sales and marketing	304.7	269.9	214.5
General and administrative	118.1	128.9	92.0
Total share-based compensation	\$ 1,013.4	\$ 926.9	\$ 664.5

Revenue

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

Product Revenue

Product revenue is derived from sales of our appliances, primarily our ML-Powered Next-Generation Firewall, which is available in a number of form factors, including as physical, virtual, and containerized appliances. Product revenue also includes revenue derived from software licenses of Panorama. Our appliances and software licenses include a broad set of built-in networking and security features and functionalities. We recognize product revenue at the time of hardware shipment or delivery of software license.

	Year Ended July 31,		Change		Year Ended July 31,		Change	
	2022	2021	Amount	%	2021	2020	Amount	%
	Amount	Amount			Amount	Amount		
	(dollars in millions)							
Product	\$ 1,363.1	\$ 1,120.3	\$ 242.8	21.7 %	\$ 1,120.3	\$ 1,064.2	\$ 56.1	5.3 %

Product revenue increased for fiscal 2022 compared to fiscal 2021 primarily due to increased demand for our new generation of products, which includes customer transition from our legacy products.

Subscription and Support Revenue

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

	Year Ended July 31,		Change		Year Ended July 31,		Change	
	2022	2021	Amount	%	2021	2020	Amount	%
	Amount	Amount			Amount	Amount		
	(dollars in millions)							
Subscription	\$ 2,539.0	\$ 1,898.8	\$ 640.2	33.7 %	\$ 1,898.8	\$ 1,405.3	\$ 493.5	35.1 %
Support	1,599.4	1,237.0	362.4	29.3 %	1,237.0	938.9	298.1	31.7 %
Total subscription and support	\$ 4,138.4	\$ 3,135.8	\$ 1,002.6	32.0 %	\$ 3,135.8	\$ 2,344.2	\$ 791.6	33.8 %

Subscription and support revenue increased for fiscal 2022 compared to fiscal 2021 due to increased demand for our subscription and support offerings from our 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 end-customers.

Revenue by Geographic Theater

	Year Ended July 31,		Change		Year Ended July 31,		Change	
	2022	2021	Amount	%	2021	2020	Amount	%
	Amount	Amount			Amount	Amount		
	(dollars in millions)							
Americas	\$ 3,802.6	\$ 2,937.5	\$ 865.1	29.5 %	\$ 2,937.5	\$ 2,318.0	\$ 619.5	26.7 %
EMEA	1,055.8	817.3	238.5	29.2 %	817.3	671.9	145.4	21.6 %
APAC	643.1	501.3	141.8	28.3 %	501.3	418.5	82.8	19.8 %
Total revenue	\$ 5,501.5	\$ 4,256.1	\$ 1,245.4	29.3 %	\$ 4,256.1	\$ 3,408.4	\$ 847.7	24.9 %

With respect to geographic theaters, the Americas contributed the largest portion of the year-over-year increases in revenue for fiscal 2022 due to its larger and more established sales force compared to our other theaters. Revenue from Europe, the Middle East, and Africa (“EMEA”) and Asia Pacific and Japan (“APAC”) increased year-over-year for fiscal 2022 due to increasing investment in global sales force in order to support our growth and innovation.

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 for procuring components and manufacturing our products. 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 and tariff costs, and shared costs. Shared 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 fluctuate with our product revenue.

	Year Ended July 31,				Year Ended July 31,			
	2022		2021		2021		2020	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Cost of product revenue	\$ 455.5	\$ 308.5	\$ 147.0	47.6 %	\$ 308.5	\$ 294.4	\$ 14.1	4.8 %
Number of employees at period end	149	127	22	17.3 %	127	117	10	8.5 %

Cost of product revenue increased for fiscal 2022 compared to fiscal 2021 primarily due to an increase in the volume of product sold. The remaining increase in costs was primarily driven by supply chain challenges.

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 service costs, amortization of acquired intangible assets and capitalized software development costs, and shared 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.

	Year Ended July 31,				Year Ended July 31,			
	2022		2021		2021		2020	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Cost of subscription and support revenue	\$ 1,263.2	\$ 966.4	\$ 296.8	30.7 %	\$ 966.4	\$ 705.1	\$ 261.3	37.1 %
Number of employees at period end	2,515	2,108	407	19.3 %	2,108	1,402	706	50.4 %

Cost of subscription and support revenue increased for fiscal 2022 compared to fiscal 2021 primarily due to increased costs to support the growth of our subscription and support offerings. Personnel costs grew \$135.4 million to \$547.8 million for fiscal 2022 compared to fiscal 2021 primarily due to headcount growth. The remaining increase was primarily due to increased cloud hosting service costs to support our cloud-based subscription offerings, outside service costs for global customer support resulting from the expansions of our customer base and product portfolio, and shared costs.

Gross Margin

Gross margin 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, cloud hosting service costs, personnel costs, the mix of products sold, and the mix of revenue between product and subscription and support offerings. Our virtual and higher-end firewall products generally have higher gross margins than our lower-end firewall products within each product series. We expect our gross margins to vary over time depending on the factors described above.

	Year Ended July 31,					
	2022		2021		2020	
	Amount	Gross Margin	Amount	Gross Margin	Amount	Gross Margin
	(dollars in millions)					
Product	\$ 907.6	66.6 %	\$ 811.8	72.5 %	\$ 769.8	72.3 %
Subscription and support	2,875.2	69.5 %	2,169.4	69.2 %	1,639.1	69.9 %
Total gross profit	<u>\$ 3,782.8</u>	<u>68.8 %</u>	<u>\$ 2,981.2</u>	<u>70.0 %</u>	<u>\$ 2,408.9</u>	<u>70.7 %</u>

Product gross margin decreased for fiscal 2022 compared to fiscal 2021 primarily due to higher costs related to our product offerings driven by supply chain challenges.

Subscription and support gross margin was relatively flat for fiscal 2022 compared to fiscal 2021.

Operating Expenses

Our operating expenses consist of research and development, sales and marketing, and general and administrative expenses. 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 shared costs, which consist of certain facilities, depreciation, benefits, recruiting, and information technology costs that we allocate based on headcount to each department. We expect operating expenses generally 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, 2022, we expect to recognize approximately \$1.8 billion of share-based compensation expense over a weighted-average period of approximately 2.6 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 shared 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.

	Year Ended July 31,		Change		Year Ended July 31,		Change	
	2022	2021	Amount	%	2021	2020	Amount	%
	Amount	Amount			Amount	Amount		
	(dollars in millions)							
Research and development	\$ 1,417.7	\$ 1,140.4	\$ 277.3	24.3 %	\$ 1,140.4	\$ 768.1	\$ 372.3	48.5 %
Number of employees at period end	3,268	2,595	673	25.9 %	2,595	1,821	774	42.5 %

Research and development expense increased for fiscal 2022 compared to fiscal 2021 primarily due to an increase in personnel costs, which grew \$193.5 million to \$1.1 billion, primarily due to headcount growth. The increase in research and development expense was further driven by increased shared costs and third-party product development costs.

Sales and Marketing

Sales and marketing expense consists primarily of personnel costs, including commission expense. Sales and marketing expense also includes costs for market development programs, promotional and other marketing costs, professional services, and shared costs. We continue to strategically invest in headcount and have grown our sales presence. 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 grow our customer base, increase touch points with end-customers, and expand our global presence, although our sales and marketing expense may fluctuate as a percentage of total revenue.

	Year Ended July 31,		Change		Year Ended July 31,		Change	
	2022	2021	Amount	%	2021	2020	Amount	%
	Amount	Amount			Amount	Amount		
	(dollars in millions)							
Sales and marketing	\$ 2,148.9	\$ 1,753.8	\$ 395.1	22.5 %	\$ 1,753.8	\$ 1,520.2	\$ 233.6	15.4 %
Number of employees at period end	5,167	4,493	674	15.0 %	4,493	3,800	693	18.2 %

Sales and marketing expense increased for fiscal 2022 compared to fiscal 2021 primarily due to an increase in personnel costs, which grew \$291.8 million to \$1.6 billion, primarily due to headcount growth and increased travel and entertainment expenses. The increase in sales and marketing expense was further driven by an increase in costs associated with marketing activities.

General and Administrative

General and administrative expense consists primarily of personnel costs and shared costs for our executive, finance, human resources, information technology, and legal organizations, and professional services costs, which consist primarily of legal, auditing, accounting, and other consulting costs. We expect general and administrative expense to increase in absolute dollars as we increase the size of our general and administrative organizations and incur additional costs to support our business growth, although our general and administrative expense may fluctuate as a percentage of total revenue.

	Year Ended July 31,				Year Ended July 31,			
	2022		2021		2021		2020	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
General and administrative	\$ 405.0	\$ 391.1	\$ 13.9	3.6 %	\$ 391.1	\$ 299.6	\$ 91.5	30.5 %
Number of employees at period end	1,462	1,150	312	27.1 %	1,150	874	276	31.6 %

General and administrative expenses increased for fiscal 2022 compared to fiscal 2021 primarily due to personnel costs, which grew \$24.6 million to \$268.6 million, partially offset by a decrease in acquisition-related costs. The increase in personnel costs was primarily due to headcount growth, partially offset by lower share-based compensation related to accelerated vesting of equity awards in connection with acquisitions.

Interest Expense

Interest expense primarily consists of interest expense related to our 0.75% Convertible Senior Notes due 2023 (the “2023 Notes”) and the 0.375% Convertible Senior Notes due 2025 (the “2025 Notes,” and together with “2023 Notes,” the “Notes”).

	Year Ended July 31,				Year Ended July 31,			
	2022		2021		2021		2020	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Interest expense	\$ 27.4	\$ 163.3	\$ (135.9)	(83.2)%	\$ 163.3	\$ 88.7	\$ 74.6	84.1 %

Interest expense decreased for fiscal 2022 compared to fiscal 2021 primarily because we no longer recognize interest expense for amortization of the debt discount as a result of the adoption of new debt guidance. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies and Note 10. Debt in Part II, Item 8 of this Annual Report on Form 10-K for more information.

Other Income, Net

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

	Year Ended July 31,				Year Ended July 31,			
	2022		2021		2021		2020	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Other income, net	\$ 9.0	\$ 2.4	\$ 6.6	275.0 %	\$ 2.4	\$ 35.9	\$ (33.5)	(93.3)%

Other income, net increased for fiscal 2022 compared to fiscal 2021 primarily due to increased foreign currency exchange gains and higher interest income earned on our cash, cash equivalent, and investment balances as a result of higher interest rates for fiscal 2022 compared to fiscal 2021, partially offset by increased losses related to non-designated derivative instruments.

Provision for Income Taxes

Provision for income taxes consists primarily of income taxes in foreign jurisdictions in which we conduct business and withholding taxes. We maintain a full valuation allowance for domestic and certain foreign deferred tax assets, including net operating loss carryforwards and certain domestic tax credits. Our valuation allowance has caused, and may continue to cause, disproportionate relationships between our overall effective tax rate and other jurisdictional measures.

	Year Ended July 31,				Year Ended July 31,			
	2022		2021		2021		2020	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Provision for income taxes	\$ 59.8	\$ 33.9	\$ 25.9	76.4 %	\$ 33.9	\$ 35.2	\$ (1.3)	(3.7)%
Effective tax rate	(28.9)%	(7.3)%			(7.3)%	(15.2)%		

We recorded an income tax provision for fiscal 2022. The provision for income taxes for fiscal 2022 was primarily due to income taxes in profitable foreign jurisdictions and withholding taxes. Our provision for income taxes increased for fiscal 2022 compared to fiscal 2021, primarily due to foreign income and withholding taxes. Refer to Note 15. Income Taxes in Part II, Item 8 of this Annual Report on Form 10-K for more information.

Liquidity and Capital Resources

	July 31,	
	2022	2021
	(in millions)	
Working capital ⁽¹⁾	\$ (1,891.4)	\$ (469.4)
Cash, cash equivalents, and investments:		
Cash and cash equivalents	\$ 2,118.5	\$ 1,874.2
Investments	2,567.9	1,915.2
Total cash, cash equivalents, and investments	\$ 4,686.4	\$ 3,789.4

⁽¹⁾ Current liabilities included net carrying amounts of convertible senior notes of \$3.7 billion and \$1.6 billion as of July 31, 2022 and 2021, respectively. Refer to Note 10. Debt in Part II, Item 8 of this Annual Report on Form 10-K for information on the Notes.

As of July 31, 2022, our total cash, cash equivalents, and investments of \$4.7 billion were held for general corporate purposes. As of July 31, 2022, 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 are not expected to be material.

Debt

In July 2018, we issued the 2023 Notes with an aggregate principal amount of \$1.7 billion. In June 2020, we issued the 2025 Notes with an aggregate principal amount of \$2.0 billion. The 2023 Notes mature on July 1, 2023 and the 2025 Notes mature on June 1, 2025; however, under certain circumstances, holders may surrender their Notes of a series for conversion prior to the applicable maturity date. 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. The sale price condition for the Notes was met during the fiscal quarter ended July 31, 2022, and as a result, holders may convert their Notes at any time during the fiscal quarter ending October 31, 2022. If all of the holders of the Notes converted their Notes during this period, we would be obligated to settle the \$3.7 billion principal amount of the Notes in cash. We believe that our cash provided by operating activities, our existing cash, cash equivalents and investments, and existing sources of and access to financing will be sufficient to meet our anticipated cash needs should the holders choose to convert their Notes during the fiscal quarter ending October 31, 2022 or hold the 2023 Notes until maturity on July 1, 2023. As of July 31, 2022, substantially all of our Notes remained outstanding. Refer to Note 10. Debt in Part II, Item 8 of this Annual Report on Form 10-K for more information on the Notes.

In September 2018, we entered into a credit agreement (the "Credit Agreement") that provides for a \$400.0 million unsecured revolving credit facility (the "Credit Facility"), with an option to increase the amount of the Credit Facility by up to an additional \$350.0 million, subject to certain conditions. As of July 31, 2022, there were no amounts outstanding, and we were in compliance with all covenants under the Credit Agreement. Refer to Note 10. Debt in Part II, Item 8 of this Annual Report on Form 10-K for more information on the Credit Agreement.

Capital Return

In February 2019, our board of directors authorized a \$1.0 billion share repurchase program. In December 2020 and August 2021, our board of directors authorized additional \$700.0 million and \$676.1 million increases, respectively, bringing the total authorization under this share repurchase program to \$2.4 billion. Repurchases will be funded from available working capital and may be made at management's discretion from time to time. The expiration date of this repurchase authorization was extended to December 31, 2022, and our repurchase program may be suspended or discontinued at any time. As of July 31, 2022, 85.0 million remained available for future share repurchases under this repurchase program. In February 2020, our board of directors approved the repurchase of \$1.0 billion of our common stock through an accelerated share repurchase ("ASR") transaction, which was in addition to our current authorization. During fiscal 2020, we completed the ASR transaction with an aggregate of 5.2 million shares of our common stock repurchased and retired. Refer to Note 13. Stockholders' Equity in Part II, Item 8 of this Annual Report on Form 10-K for information on these repurchase programs.

Leases and Other Material Cash Requirements

We have entered into various non-cancelable operating leases primarily for our facilities with original lease periods expiring through the year ending July 31, 2032, with the most significant leases relating to our corporate headquarters in Santa Clara, California. As of July 31, 2022, we have total operating lease obligations of \$338.4 million recorded on our consolidated balance sheet.

As of July 31, 2022, our commitments to purchase products, components, cloud and other services totaled \$2.4 billion. Refer to Note 12. Commitments and Contingencies in Part II, Item 8 of this Annual Report on Form 10-K for more information on these commitments.

Cash Flows

The following table summarizes our cash flows for the years ended July 31, 2022, 2021, and 2020:

	Year Ended July 31,		
	2022	2021	2020
	(in millions)		
Net cash provided by operating activities	\$ 1,984.7	\$ 1,503.0	\$ 1,035.7
Net cash provided by (used in) investing activities	(933.4)	(1,480.6)	288.0
Net cash provided by (used in) financing activities	(806.6)	(1,104.0)	673.0
Net increase (decrease) in cash, cash equivalents, and restricted cash	<u>\$ 244.7</u>	<u>\$ (1,081.6)</u>	<u>\$ 1,996.7</u>

Cash from operations could be affected by various risks and uncertainties, including, but not limited to, the effects of COVID-19 and other risks detailed in Part I, Item 1A "Risk Factors" in this Form 10-K. We believe that our cash flow from operations with existing cash and cash equivalents will be sufficient to meet our anticipated cash needs for at least the next 12 months and thereafter 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 repayment obligations associated with our Notes, the continuing market acceptance of our products and subscription and support offerings and macroeconomic events such as COVID-19. 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. Our largest source of cash provided by our operations is receipts from our product revenue and subscription and support revenue.

Cash provided by operating activities during fiscal 2022 was \$2.0 billion, an increase of \$481.7 million compared to fiscal 2021. The increase was primarily due to growth of our business as reflected by increases in billings and collections during fiscal 2022, partially offset by higher cash expenditure to support our business growth.

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 2022 was \$933.4 million, a decrease of \$547.2 million compared to fiscal 2021. The decrease was primarily due to a decrease in net cash payments for business acquisitions, partially offset by an increase in net investment purchases, sales and maturities during fiscal 2022.

Financing Activities

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

Cash used in financing activities during fiscal 2022 was \$806.6 million, a decrease of \$297.4 million compared to fiscal 2021. The decrease was primarily due to a decrease in repurchases of our common stock during fiscal 2022.

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 could differ materially from those estimates due to risks and uncertainties, including uncertainty in the current economic environment. To the extent that there are material differences between these estimates and our actual results, our future consolidated financial statements will be affected.

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 estimates, assumptions, and judgments that have the most significant impact on our consolidated financial statements are described below.

Revenue Recognition

The majority of our contracts with our customers include various combinations of our products and subscriptions and support. Our appliances and software licenses have significant standalone functionalities and capabilities and, accordingly, are distinct from our subscriptions and support services, as the customer can benefit from the product without these services and such services are separately identifiable within the contract. We account for multiple agreements with a single customer as a single contract if the contractual terms and/or substance of those agreements indicate that they may be so closely related that they are, in effect, parts of a single contract. The amount we are due in exchange for delivering on the contract is allocated to each performance obligation based on its relative standalone selling price.

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

Deferred Contract Costs

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

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 consolidated 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 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 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.

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 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 impact 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 but limited to the total amount of goodwill. To date, the results of our qualitative assessment have indicated that the quantitative goodwill impairment test is not necessary.

We evaluate purchased intangible assets and other long-lived 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.

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. 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, 2022 would not be material to our financial condition or results of operations. As of July 31, 2022, foreign currency transaction gains and losses and exchange rate fluctuations have not been material to our consolidated financial statements. We enter into foreign currency derivative contracts with maturities of 16 months or less which we designate as cash flow hedges to manage the foreign currency exchange risk associated with our foreign currency denominated operating 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 6. 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 fluctuations in foreign currency exchange 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 foreign 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. Most of the securities we invest in are subject to interest rate 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, corporate debt securities, and asset-backed securities. To assess the interest rate risk, we performed a sensitivity analysis to determine the impact a change in interest rates would have on the value of the investment portfolio. Based on investment positions as of July 31, 2022, a hypothetical 100 basis point increase in interest rates across all maturities would result in a \$20.6 million decline in the fair market value of the portfolio. Such losses would only be realized if we sold the investments prior to maturity. Conversely, a hypothetical 100 basis point decrease in interest rates would lead to a \$20.6 million increase in the fair market value of the portfolio.

In July 2018, we issued \$1.7 billion aggregate principal amount of 0.75% Convertible Senior Notes due 2023 (the “2023 Notes”) and in June 2020, we issued \$2.0 billion aggregate principal amount of 0.375% Convertible Senior Notes due 2025 (the “2025 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 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

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Reports of Independent Registered Public Accounting Firm (PCAOB ID: 42)	59
Consolidated Balance Sheets	62
Consolidated Statements of Operations	63
Consolidated Statements of Comprehensive Loss	64
Consolidated Statements of Stockholders' Equity	65
Consolidated Statements of Cash Flows	66
Notes to Consolidated Financial Statements	67

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, 2022 and 2021, 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, 2022, 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, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended July 31, 2022, 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, 2022, 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 6, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

Critical Audit Matter

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

Revenue Recognition

Description of the Matter

As described in Note 1 to the consolidated financial statements, the Company's contracts with customers sometimes contain multiple performance obligations, which are accounted for separately if they are distinct. In such cases, the transaction price is then allocated to the distinct performance obligations on a relative standalone selling price basis, and revenue is recognized when control of the distinct performance obligation is transferred. For example, product revenue is recognized at the time of hardware shipment or delivery of software license, and subscription and support revenue is recognized over time as the services are performed.

Auditing the Company's revenue recognition was complex, including the identification and determination of distinct performance obligations and the timing of revenue recognition. For example, there were nonstandard terms and conditions that required judgment to determine the distinct performance obligations and the impact on the timing of revenue recognition.

How We Addressed the Matter in Our Audit

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

To test the identification and determination of the distinct performance obligations and the timing of revenue recognition, our audit procedures included, among others, reading the executed contract and purchase order to understand the contract, identifying the performance obligation(s), determining the distinct performance obligations, and evaluating the timing of revenue recognition for a sample of individual sales transactions. We evaluated the accuracy of the Company's contract summary documentation, specifically related to the identification and determination of distinct performance obligations and the timing of revenue recognition.

/s/ Ernst & Young LLP

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

San Jose, California
September 6, 2022

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, 2022, 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, 2022, 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, 2022 and 2021, 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, 2022, and the related notes and our report dated September 6, 2022 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 6, 2022

PALO ALTO NETWORKS, INC.
CONSOLIDATED BALANCE SHEETS
(In millions, except per share data)

	July 31,	
	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 2,118.5	\$ 1,874.2
Short-term investments	1,516.0	1,026.9
Accounts receivable, net of allowance for credit losses of \$8.9 and \$11.2 at July 31, 2022 and July 31, 2021, respectively	2,142.5	1,240.4
Short-term deferred contract costs	317.7	276.5
Prepaid expenses and other current assets	320.2	229.3
Total current assets	6,414.9	4,647.3
Property and equipment, net	357.8	318.4
Operating lease right-of-use assets	242.0	262.9
Long-term investments	1,051.9	888.3
Long-term deferred contract costs	550.1	494.6
Goodwill	2,747.7	2,710.1
Intangible assets, net	384.5	498.6
Other assets	504.7	421.4
Total assets	<u>\$ 12,253.6</u>	<u>\$ 10,241.6</u>
Liabilities, temporary equity and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 128.0	\$ 56.9
Accrued compensation	461.1	430.6
Accrued and other liabilities	399.2	329.4
Deferred revenue	3,641.2	2,741.9
Convertible senior notes, net	3,676.8	1,557.9
Total current liabilities	8,306.3	5,116.7
Convertible senior notes, net	—	1,668.1
Long-term deferred revenue	3,352.8	2,282.1
Long-term operating lease liabilities	276.1	313.4
Other long-term liabilities	108.4	97.7
Total liabilities	12,043.6	9,478.0
Commitments and contingencies (Note 12)		
Temporary equity	—	129.1
Stockholders' equity:		
Preferred stock; \$0.0001 par value; 100.0 shares authorized; none issued and outstanding at July 31, 2022 and July 31, 2021	—	—
Common stock and additional paid-in capital; \$0.0001 par value; 1,000.0 shares authorized; 99.6 and 97.3 shares issued and outstanding at July 31, 2022 and July 31, 2021, respectively	1,932.7	2,311.2
Accumulated other comprehensive loss	(55.6)	(9.9)
Accumulated deficit	(1,667.1)	(1,666.8)
Total stockholders' equity	210.0	634.5
Total liabilities, temporary equity and stockholders' equity	<u>\$ 12,253.6</u>	<u>\$ 10,241.6</u>

See notes to consolidated financial statements.

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

	Year Ended July 31,		
	2022	2021	2020
Revenue:			
Product	\$ 1,363.1	\$ 1,120.3	\$ 1,064.2
Subscription and support	4,138.4	3,135.8	2,344.2
Total revenue	5,501.5	4,256.1	3,408.4
Cost of revenue:			
Product	455.5	308.5	294.4
Subscription and support	1,263.2	966.4	705.1
Total cost of revenue	1,718.7	1,274.9	999.5
Total gross profit	3,782.8	2,981.2	2,408.9
Operating expenses:			
Research and development	1,417.7	1,140.4	768.1
Sales and marketing	2,148.9	1,753.8	1,520.2
General and administrative	405.0	391.1	299.6
Total operating expenses	3,971.6	3,285.3	2,587.9
Operating loss	(188.8)	(304.1)	(179.0)
Interest expense	(27.4)	(163.3)	(88.7)
Other income, net	9.0	2.4	35.9
Loss before income taxes	(207.2)	(465.0)	(231.8)
Provision for income taxes	59.8	33.9	35.2
Net loss	\$ (267.0)	\$ (498.9)	\$ (267.0)
Net loss per share, basic and diluted	\$ (2.71)	\$ (5.18)	\$ (2.76)
Weighted-average shares used to compute net loss per share, basic and diluted	98.5	96.4	96.9

See notes to consolidated financial statements.

PALO ALTO NETWORKS, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

(In millions)

	Year Ended July 31,		
	2022	2021	2020
Net loss	\$ (267.0)	\$ (498.9)	\$ (267.0)
Other comprehensive income (loss), net of tax:			
Change in unrealized gains (losses) on investments	(25.0)	(3.0)	1.0
Cash flow hedges:			
Change in unrealized gains (losses)	(54.0)	1.1	8.3
Net realized (gains) losses reclassified into earnings	33.3	(18.5)	4.9
Net change on cash flow hedges	(20.7)	(17.4)	13.2
Other comprehensive income (loss)	(45.7)	(20.4)	14.2
Comprehensive loss	\$ (312.7)	\$ (519.3)	\$ (252.8)

See notes to consolidated financial statements.

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, 2019	96.8	\$ 2,490.9	\$ (3.7)	\$ (900.9)	\$ 1,586.3
Net loss	—	—	—	(267.0)	(267.0)
Other comprehensive income	—	—	14.2	—	14.2
Issuance of common stock in connection with employee equity incentive plans	3.6	84.0	—	—	84.0
Taxes paid related to net share settlement of equity awards	—	(22.7)	—	—	(22.7)
Share-based compensation for equity-based awards	—	674.4	—	—	674.4
Repurchase and retirement of common stock	(6.1)	(1,198.1)	—	—	(1,198.1)
Settlement of warrants	2.0	—	—	—	—
Equity component of convertible senior notes, net	—	398.7	—	—	398.7
Issuance of warrants	—	202.8	—	—	202.8
Purchase of note hedges	—	(370.8)	—	—	(370.8)
Balance as of July 31, 2020	96.3	2,259.2	10.5	(1,167.9)	1,101.8
Net loss	—	—	—	(498.9)	(498.9)
Other comprehensive loss	—	—	(20.4)	—	(20.4)
Issuance of common stock in connection with employee equity incentive plans	3.7	104.0	—	—	104.0
Taxes paid related to net share settlement of equity awards	—	(28.9)	—	—	(28.9)
Share-based compensation for equity-based awards	—	943.4	—	—	943.4
Repurchase and retirement of common stock	(4.0)	(1,178.1)	—	—	(1,178.1)
Issuance of common and restricted common stock in connection with acquisitions	1.3	340.7	—	—	340.7
Temporary equity reclassification	—	(129.1)	—	—	(129.1)
Balance as of July 31, 2021	97.3	2,311.2	(9.9)	(1,666.8)	634.5
Cumulative-effect adjustment from adoption of new accounting pronouncement	—	(581.9)	—	266.7	(315.2)
Net loss	—	—	—	(267.0)	(267.0)
Other comprehensive loss	—	—	(45.7)	—	(45.7)
Issuance of common stock in connection with employee equity incentive plans	4.1	137.3	—	—	137.3
Taxes paid related to net share settlement of equity awards	—	(50.3)	—	—	(50.3)
Share-based compensation for equity-based awards	—	1,031.4	—	—	1,031.4
Repurchase and retirement of common stock	(1.8)	(915.0)	—	—	(915.0)
Balance as of July 31, 2022	99.6	\$ 1,932.7	\$ (55.6)	\$ (1,667.1)	\$ 210.0

See notes to consolidated financial statements.

PALO ALTO NETWORKS, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended July 31,		
	2022	2021	2020
Cash flows from operating activities			
Net loss	\$ (267.0)	\$ (498.9)	\$ (267.0)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Share-based compensation for equity-based awards	1,011.1	894.5	658.4
Depreciation and amortization	282.6	260.4	206.1
Gain related to facility exit	—	—	(3.1)
Amortization of deferred contract costs	362.1	298.0	254.4
Amortization of debt discount and debt issuance costs	7.2	142.9	73.9
Reduction of operating lease right-of-use assets	54.4	44.5	47.4
Amortization of investment premiums, net of accretion of purchase discounts	13.5	13.1	(6.2)
Repayments of convertible senior notes attributable to debt discount	—	(0.1)	—
Changes in operating assets and liabilities, net of effects of acquisitions:			
Accounts receivable, net	(902.0)	(172.4)	(435.6)
Deferred contract costs	(458.8)	(440.8)	(407.4)
Prepaid expenses and other assets	(141.0)	(299.1)	(1.6)
Accounts payable	69.3	(11.8)	(12.8)
Accrued compensation	30.4	105.1	75.7
Accrued and other liabilities	(47.1)	(28.5)	(39.8)
Deferred revenue	1,970.0	1,196.1	893.3
Net cash provided by operating activities	1,984.7	1,503.0	1,035.7
Cash flows from investing activities			
Purchases of investments	(2,271.7)	(1,958.9)	(1,180.8)
Proceeds from sales of investments	449.2	131.1	314.0
Proceeds from maturities of investments	1,118.9	1,240.5	1,952.7
Business acquisitions, net of cash acquired	(37.0)	(777.3)	(583.5)
Purchases of property, equipment, and other assets	(192.8)	(116.0)	(214.4)
Net cash provided by (used in) investing activities	(933.4)	(1,480.6)	288.0
Cash flows from financing activities			
Repayments of convertible senior notes	(0.6)	(0.9)	—
Payments for debt issuance costs	—	(0.2)	—
Proceeds from borrowings on convertible senior notes, net	—	—	1,979.1
Proceeds from issuance of warrants	—	—	202.8
Purchase of note hedges	—	—	(370.8)
Repurchases of common stock	(892.3)	(1,178.1)	(1,198.1)
Proceeds from sales of shares through employee equity incentive plans	136.6	104.0	84.0
Payments for taxes related to net share settlement of equity awards	(50.3)	(28.8)	(22.7)
Payment of deferred consideration related to prior year business acquisition	—	—	(1.3)
Net cash provided by (used in) financing activities	(806.6)	(1,104.0)	673.0
Net increase (decrease) in cash, cash equivalents, and restricted cash	244.7	(1,081.6)	1,996.7
Cash, cash equivalents, and restricted cash—beginning of period	1,880.1	2,961.7	965.0
Cash, cash equivalents, and restricted cash—end of period	<u>\$ 2,124.8</u>	<u>\$ 1,880.1</u>	<u>\$ 2,961.7</u>
Reconciliation of cash, cash equivalents, and restricted cash to the consolidated balance sheets			
Cash and cash equivalents	\$ 2,118.5	\$ 1,874.2	\$ 2,958.0
Restricted cash included in prepaid expenses and other current assets	6.3	5.4	2.8
Restricted cash included in other assets	—	0.5	0.9
Total cash, cash equivalents, and restricted cash	<u>\$ 2,124.8</u>	<u>\$ 1,880.1</u>	<u>\$ 2,961.7</u>
Non-cash investing and financing activities			
Equity consideration for business acquisitions	\$ (2.5)	\$ (365.4)	\$ (11.0)
Supplemental disclosures of cash flow information			
Cash paid for income taxes	\$ 34.6	\$ 24.9	\$ 17.2
Cash paid for contractual interest	\$ 20.2	\$ 20.0	\$ 13.5

See notes to consolidated financial statements.

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”), headquartered in Santa Clara, California, was incorporated in March 2005 under the laws of the State of Delaware and commenced operations in April 2005. We empower enterprises, organizations, service providers, and government entities to secure their users, networks, clouds and endpoints by delivering comprehensive cybersecurity backed by artificial intelligence and automation.

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.

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 amounts reported and disclosed in the consolidated financial statements and the accompanying notes. We evaluate our estimates on an ongoing basis. Management estimates include, but are not limited to, the standalone 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 intangibles and goodwill, valuation allowance against deferred tax assets, manufacturing partner and supplier liabilities, deferred contract cost benefit period, and loss contingencies. We base our estimates on assumptions, both historical and forward looking, that we believe are reasonable. Actual results could differ materially from those estimates due to risks and uncertainties, including uncertainty in the current economic environment.

Concentrations

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

We invest only in high-quality credit instruments and our cash and cash equivalents and available-for-sale investments consist primarily of 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 receivable are primarily derived from our distributors in various geographical locations. Our financing receivables are with qualified end-customers. We perform ongoing credit evaluations and generally do not require collateral on accounts receivable or financing receivables.

As of July 31, 2022, three distributors individually represented 10% or more of our gross accounts receivable, and in the aggregate represented 47.7% of our gross accounts receivable. As of July 31, 2022, two end-customers represented 10% or more of our gross financing receivables, and in aggregate represented 33.7% of our gross financing receivables.

For fiscal 2022, three distributors represented 10% or more of our total revenue, representing 29.7%, 12.4%, and 11.5%, respectively. No single end-customer accounted for more than 10% of our total revenue in fiscal 2022, 2021, or 2020.

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.

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 remeasurement gains and losses and foreign currency transaction gains and losses are not significant to the consolidated 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 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.

Our financial assets and liabilities that are measured at fair value on a recurring basis include marketable securities and derivative financial instruments. 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 consider all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents. Investments not considered cash equivalents, and with maturities of 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.

We determine the classification of our investments in marketable debt securities at the time of purchase and reevaluate such determination at each balance sheet date. Our marketable debt securities are classified as available-for-sale. Debt securities in an unrealized loss position are written down to its fair value with the corresponding charge recorded in other income, net in our consolidated statements of operations, if it is more likely than not that we will be required to sell the impaired security before recovery of its amortized cost basis, or we have the intention to sell the security. If neither of these conditions are met, we determine whether a credit loss exists by comparing the present value of the expected cash flows of the security with its amortized cost basis. An allowance for credit losses is recorded in other income, net in our consolidated statements of operations for an amount not to exceed the unrealized loss. Unrealized losses that are not credit-related are included in accumulated other comprehensive income (loss) ("AOCI") in stockholders' equity.

Accounts Receivable

Trade accounts receivable are recorded at the invoiced amount, net of allowances for credit losses. The allowance for credit losses is based on our assessment of collectability. Management regularly reviews the adequacy of the allowance for credit losses on a collective basis by considering the age of each outstanding invoice, each customer's expected ability to pay and collection history, current market conditions, and reasonable and supportable forecasts of future economic conditions. Accounts receivable deemed uncollectible are charged against the allowance for credit losses. For the years ended July 31, 2022 and 2021, the allowance for credit losses activity was not significant.

Financing Receivables

We provide financing arrangements for certain qualified end-user customers to purchase our products and services. Payment terms on these financing arrangements are up to five years. Financing receivables are recorded at amortized cost, which approximates fair value. We may sell, in certain instances, these financing arrangements on a non-recourse basis to third party financial institutions. The financing receivables are derecognized upon transfer as these sales qualify as true sales.

We evaluate the allowance for credit losses by assessing the risks and losses inherent in our financing receivables on either an individual or a collective basis. Our assessment considers various factors, including lifetime expected losses determined using customer risk profile, current economic conditions that may affect a customer's ability to pay, and forward-looking economic considerations. Financing receivables deemed uncollectible are charged against the allowance for credit losses. Short-term financing receivables are included in prepaid expenses and other current assets, and long-term financing receivables are included in other assets on our consolidated balance sheets.

Derivatives

We are exposed to foreign currency exchange 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 16 months or less, which we designate as cash flow hedges, to manage the foreign currency exchange risk associated with our operating expenditures.

Our derivative financial instruments are recorded at fair value, on a gross basis, as either assets or liabilities on our consolidated balance sheets. Gains or losses related to our cash flow hedges are recorded as a component of AOCI on 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. Gains or losses related to non-designated derivative instruments are recognized in other income, 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. Land is not depreciated.

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 assets acquired and liabilities assumed, generally 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 is less than its carrying amount, then the quantitative impairment test will be performed. Under the quantitative impairment test, if the carrying amount 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 or asset groups 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 or asset group, we record an impairment loss for the amount by which the carrying amount exceeds the fair value of the asset or asset group.

We did not recognize any impairment losses on our goodwill, intangible assets, or other long-lived assets during the years ended July 31, 2022, 2021, and 2020.

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 are contractually obligated to purchase manufactured products and components, we generally do not own the components and manufactured products. Product title transfers from our EMS provider to us and immediately to our customers 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 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, 2022, we have not accrued any significant costs associated with this exposure.

Convertible Senior Notes

Prior to August 1, 2021, our convertible senior notes were separated into a liability and an equity component. The carrying amount of the liability component was calculated by measuring the fair value of a similar liability that did not have an associated convertible feature, using a discounted cash flow model with a risk-adjusted yield. The carrying amount of the equity component representing the conversion option was determined by deducting the fair value of the liability component from the par value of the notes as a whole. This difference represented a debt discount that was amortized to interest expense using the effective interest method over the term of the notes. The equity component was not remeasured as it continued to meet the conditions for equity classification. Transaction costs related to the issuance of the notes were allocated to the liability and equity components using the same proportions as the proceeds from the notes. Transaction costs attributable to the liability component were 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 were netted with the equity component of the notes in additional paid-in capital. Upon the notes becoming convertible, the net carrying amount of the liability component was classified as a current liability and a portion of the equity component representing the conversion option was reclassified to temporary equity. The portion of the equity component classified as temporary equity was measured as the difference between the principal and net carrying amount of the notes, excluding debt issuance costs.

Upon adoption of the new debt guidance on August 1, 2021, our convertible senior notes are accounted for entirely as a liability and measured at their amortized cost. Transaction costs related to the issuance of the notes are netted with the liability and are amortized on a straight-line basis, which approximates the effective interest rate method, to interest expense over the term of the notes.

Revenue Recognition

Our revenue consists of product revenue and subscription and support revenue. Revenue is recognized when control of promised products, subscriptions and support services are transferred to customers, in an amount that reflects the expected consideration in exchange for those products and services.

We determine revenue recognition through the following steps:

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

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

Product Revenue

Product revenue is derived primarily from sales of our appliances. Product revenue also includes revenue derived from software licenses of Panorama and the VM-Series. Our appliances and software licenses include a broad set of built-in networking and security features and functionalities. We recognize product revenue at the time of hardware shipment or delivery of software license.

Subscription and Support Revenue

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

Contracts with Multiple Performance Obligations

The majority of our contracts with our customers include various combinations of our products and subscriptions and support. Our appliances and software licenses have significant standalone functionalities and capabilities. Accordingly, these appliances and software licenses are distinct from our subscriptions and support services as the customer can benefit from the product without these services and such services are separately identifiable within the contract. We account for multiple agreements with a single customer as a single contract if the contractual terms and/or substance of those agreements indicate that they may be so closely related that they are, in effect, parts of a single contract. The amount of consideration we expect to receive in exchange for delivering on the contract is allocated to each performance obligation based on its relative standalone selling price. If a contract contains a single performance obligation, no allocation is required.

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

Deferred Revenue

We record deferred revenue when cash payments are received or due in advance of our performance. Our payment terms typically require payment within 30 to 45 days of the date we issue an invoice. The current portion of deferred revenue represents the amounts that are expected to be recognized as revenue within one year of the consolidated balance sheet date.

Deferred Contract Costs

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

We classify deferred contract costs as short-term or long-term based on when we expect to recognize the expense. The amortization of deferred contract costs is included in sales and marketing expense in our consolidated statements of operations. Deferred contract costs are periodically reviewed for impairment. We did not recognize any impairment losses on our deferred contract costs during the years ended July 31, 2022, 2021, or 2020.

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. As of July 31, 2022 and 2021, we capitalized as other assets on our consolidated balance sheets \$130.9 million and \$114.8 million in costs, respectively, net of accumulated amortization, for security software developed to meet our internal needs to provide our cloud-based subscription offerings. We recognized amortization expense of \$62.4 million, \$47.8 million, and \$31.3 million related to these capitalized costs as cost of subscription and support revenue in our consolidated statements of operations during the years ended July 31, 2022, 2021, and 2020, respectively.

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 is measured and recognized in the consolidated 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 determine if an arrangement is a lease at inception. We evaluate the classification of leases at commencement and, as necessary, at modification. Operating leases related balances are included in operating lease right-of-use assets, accrued and other liabilities, and long-term operating lease liabilities on our consolidated balance sheets. We did not have any material finance leases in any of the periods presented.

Operating lease right-of-use assets represent our right to use an underlying asset for the lease term. Operating lease liabilities represent our obligation to make payments arising from the lease. Operating lease right-of-use assets and liabilities are recognized at the present value of the future lease payments at the lease commencement date. The interest rate used to determine the present value of the future lease payments is our incremental borrowing rate, because the interest rates implicit in most of our leases are not readily determinable. Our incremental borrowing rate is estimated to approximate the interest rate on a collateralized basis with similar terms and payments, and in economic environments where the leased asset is located. Operating lease right-of-use assets also include adjustments related to lease incentives, prepaid or accrued rent and initial direct lease costs. Operating lease right-of-use assets are subject to evaluation for impairment or disposal on a basis consistent with other long-lived assets.

Our lease terms may include periods under options to extend or terminate the lease when it is reasonably certain that we will exercise that option. We generally use the base, non-cancelable lease term when determining the lease assets and liabilities. Operating lease cost is recognized on a straight-line basis over the lease term.

We account for lease and non-lease components as a single lease component and do not recognize right-of-use assets and lease liabilities for leases with a term of 12 months or less. Payments under our lease arrangements are primarily fixed, however, certain lease agreements contain variable payments, which are expensed as incurred and not included in the operating lease right-of-use assets and liabilities. Variable lease payments are primarily comprised of real estate taxes, common area maintenance charges, and insurance costs.

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 consolidated 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 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.

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

Acquired Contract Assets and Contract Liabilities

In October 2021, the Financial Accounting Standards Board (“FASB”) issued authoritative guidance that requires companies to apply revenue guidance to recognize and measure contract assets and contract liabilities from contracts with customers acquired in a business combination on the acquisition date, instead of measuring them at fair value. We early adopted this guidance in our first quarter of fiscal 2022 on a prospective basis. The adoption of this standard did not have a material impact on our consolidated financial statements.

Debt with Conversion Options

In August 2020, the FASB issued authoritative guidance that simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments. The standard reduces the number of models used to account for convertible instruments and simplifies the classification of debt on the balance sheet.

We adopted this standard in our first quarter of fiscal 2022 using the modified-retrospective approach, under which financial results reported in periods prior to fiscal 2022 were not adjusted. The adoption of this standard resulted in an increase to convertible senior notes, net of \$444.3 million, a decrease to accumulated deficit of \$266.7 million, and a decrease to additional paid-in capital and temporary equity of \$711.0 million upon adoption.

2. Revenue*Disaggregation of Revenue*

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

	Year Ended July 31,		
	2022	2021	2020
Revenue:			
Americas			
United States	\$ 3,560.3	\$ 2,747.8	\$ 2,157.6
Other Americas	242.3	189.7	160.4
Total Americas	3,802.6	2,937.5	2,318.0
Europe, the Middle East, and Africa (“EMEA”)	1,055.8	817.3	671.9
Asia Pacific and Japan (“APAC”)	643.1	501.3	418.5
Total revenue	<u>\$ 5,501.5</u>	<u>\$ 4,256.1</u>	<u>\$ 3,408.4</u>

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

	Year Ended July 31,		
	2022	2021	2020
Revenue:			
Product	\$ 1,363.1	\$ 1,120.3	\$ 1,064.2
Subscription and support			
Subscription	2,539.0	1,898.8	1,405.3
Support	1,599.4	1,237.0	938.9
Total subscription and support	4,138.4	3,135.8	2,344.2
Total revenue	<u>\$ 5,501.5</u>	<u>\$ 4,256.1</u>	<u>\$ 3,408.4</u>

Deferred Revenue

During the years ended July 31, 2022 and 2021, we recognized approximately \$2.7 billion and \$2.0 billion of revenue pertaining to amounts that were deferred as of July 31, 2021 and 2020, respectively.

Remaining Performance Obligations

Revenue expected to be recognized from remaining performance obligations was \$8.2 billion as of July 31, 2022, of which we expect to recognize approximately \$4.1 billion over the next 12 months and the remainder thereafter.

3. Fair Value Measurements

The following table presents our financial assets and liabilities measured at fair value on a recurring basis as of July 31, 2022 and 2021 (in millions):

	July 31, 2022				July 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Cash equivalents:								
Money market funds	\$ 1,205.2	\$ —	\$ —	\$ 1,205.2	\$ 124.2	\$ —	\$ —	\$ 124.2
Certificates of deposit	—	155.3	—	155.3	—	150.4	—	150.4
Commercial paper	—	69.1	—	69.1	—	—	—	—
Corporate debt securities	—	19.5	—	19.5	—	1.0	—	1.0
U.S. government and agency securities	—	10.0	—	10.0	—	116.3	—	116.3
Non-U.S. government and agency securities	—	5.1	—	5.1	—	—	—	—
Total cash equivalents	1,205.2	259.0	—	1,464.2	124.2	267.7	—	391.9
Short-term investments:								
Certificates of deposit	—	116.4	—	116.4	—	12.4	—	12.4
Commercial paper	—	79.0	—	79.0	—	—	—	—
Corporate debt securities	—	505.0	—	505.0	—	208.9	—	208.9
U.S. government and agency securities	—	798.2	—	798.2	—	762.1	—	762.1
Non-U.S. government and agency securities	—	17.4	—	17.4	—	43.5	—	43.5
Total short-term investments	—	1,516.0	—	1,516.0	—	1,026.9	—	1,026.9
Long-term investments:								
Certificates of deposit	—	—	—	—	—	5.0	—	5.0
Corporate debt securities	—	761.2	—	761.2	—	180.7	—	180.7
U.S. government and agency securities	—	118.2	—	118.2	—	674.1	—	674.1
Non-U.S. government and agency securities	—	—	—	—	—	28.5	—	28.5
Asset-backed securities	—	172.5	—	172.5	—	—	—	—
Total long-term investments	—	1,051.9	—	1,051.9	—	888.3	—	888.3
Prepaid expenses and other current assets:								
Foreign currency forward contracts	—	2.4	—	2.4	—	4.1	—	4.1
Total prepaid expenses and other current assets	—	2.4	—	2.4	—	4.1	—	4.1
Other assets:								
Foreign currency forward contracts	—	0.7	—	0.7	—	0.1	—	0.1
Total other assets	—	0.7	—	0.7	—	0.1	—	0.1
Total assets measured at fair value	\$ 1,205.2	\$ 2,830.0	\$ —	\$ 4,035.2	\$ 124.2	\$ 2,187.1	\$ —	\$ 2,311.3

	July 31, 2022				July 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Accrued and other liabilities:								
Foreign currency forward contracts	\$ —	\$ 32.4	\$ —	\$ 32.4	\$ —	\$ 6.4	\$ —	\$ —
Total accrued and other liabilities	—	32.4	—	32.4	—	6.4	—	—
Other long-term liabilities:								
Foreign currency forward contracts	—	0.8	—	0.8	—	0.5	—	—
Total other long-term liabilities	—	0.8	—	0.8	—	0.5	—	—
Total liabilities measured at fair value	\$ —	\$ 33.2	\$ —	\$ 33.2	\$ —	\$ 6.9	\$ —	\$ —

Refer to Note 10. Debt, for the carrying amount and estimated fair value of our convertible senior notes as of July 31, 2022 and 2021.

4. Cash Equivalents and Investments

Available-for-sale Debt Securities

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

	July 31, 2022			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash equivalents:				
Certificates of deposit	\$ 155.3	\$ —	\$ —	\$ 155.3
Commercial paper	69.1	—	—	69.1
Corporate debt securities	19.5	—	—	19.5
U.S. government and agency securities	10.0	—	—	10.0
Non-U.S. government and agency securities	5.0	0.1	—	5.1
Total available-for-sale cash equivalents	\$ 258.9	\$ 0.1	\$ —	\$ 259.0
Investments:				
Certificates of deposit	\$ 116.5	\$ —	\$ (0.1)	\$ 116.4
Commercial paper	79.1	—	(0.1)	79.0
Corporate debt securities	1,276.8	1.3	(11.9)	1,266.2
U.S. government and agency securities	928.1	0.1	(11.8)	916.4
Non-U.S. government and agency securities	17.6	—	(0.2)	17.4
Asset-backed securities	173.4	0.2	(1.1)	172.5
Total available-for-sale investments	\$ 2,591.5	\$ 1.6	\$ (25.2)	\$ 2,567.9

	July 31, 2021			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash equivalents:				
Certificates of deposit	\$ 150.4	\$ —	\$ —	\$ 150.4
Corporate debt securities	1.0	—	—	1.0
U.S. government and agency securities	116.3	—	—	116.3
Total available-for-sale cash equivalents	\$ 267.7	\$ —	\$ —	\$ 267.7
Investments:				
Certificates of deposit	\$ 17.4	\$ —	\$ —	\$ 17.4
Corporate debt securities	389.2	0.5	(0.1)	389.6
U.S. government and agency securities	1,435.1	1.1	—	1,436.2
Non-U.S. government and agency securities	72.0	—	—	72.0
Total available-for-sale investments	\$ 1,913.7	\$ 1.6	\$ (0.1)	\$ 1,915.2

As of July 31, 2022, the gross unrealized losses that have been in a continuous unrealized loss position for less than 12 months were \$24.8 million, which were related to \$2.0 billion of available-for-sale debt securities, and the gross unrealized losses that have been in a continuous unrealized loss position for more than 12 months were not material. The gross unrealized losses on our available-for-sale debt securities as of July 31, 2021 were not material.

Unrealized losses related to our available-for-sale debt securities are due to interest rate fluctuations as opposed to credit quality. We do not intend to sell any of the securities in an unrealized loss position 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. We did not recognize any credit losses related to our available-for-sale debt securities during the years ended July 31, 2022 and 2021.

The following table summarizes the amortized cost and fair value of our available-for-sale debt securities as of July 31, 2022, by contractual years-to-maturity (in millions):

	Amortized Cost	Fair Value
Due within one year	\$ 1,789.4	\$ 1,775.0
Due between one and three years	965.2	956.4
Due between three to five years	91.5	91.2
Due between five to ten years	4.3	4.3
Total	\$ 2,850.4	\$ 2,826.9

Marketable Equity Securities

Marketable equity securities consist of money market funds and are included in cash and cash equivalents on our consolidated balance sheets. As of July 31, 2022 and 2021, the carrying value of our marketable equity securities were \$1.2 billion and \$124.2 million, respectively. There were no unrealized gains or losses recognized for these securities during the years ended July 31, 2022, 2021, and 2020.

5. Financing Receivables

The following table summarizes our short-term and long-term financing receivables (in millions):

	July 31,	
	2022	2021
Short-term financing receivables, gross	\$ 112.6	\$ 80.0
Allowance for credit losses	(1.3)	(1.0)
Short-term financing receivables, net	\$ 111.3	\$ 79.0
Long-term financing receivables, gross	\$ 194.6	\$ 198.6
Allowance for credit losses	(2.5)	(4.3)
Long-term financing receivables, net	\$ 192.1	\$ 194.3

There was no significant activity in allowance for credit losses during the years ended July 31, 2022 and 2021. Past due amounts on financing receivables were not material as of July 31, 2022 and 2021.

6. Derivative Instruments

As of July 31, 2022 and 2021, the total notional amount of our outstanding foreign currency forward contracts was \$856.9 million and \$531.9 million, respectively. Refer to Note 3. Fair Value Measurements for the fair value of our derivative instruments as reported on our consolidated balance sheets as of July 31, 2022.

As of July 31, 2022, unrealized losses in AOCI related to our cash flow hedges were \$24.8 million, of which \$22.0 million of losses are expected to be recognized into earnings within the next 12 months. As of July 31, 2021, unrealized gains and losses in AOCI related to our cash flow hedges were not material.

7. Acquisitions

Fiscal 2022

During the year ended July 31, 2022, we completed acquisitions for a combined total purchase consideration of \$40.1 million, which was primarily cash. We have accounted for these transactions as business combinations, and recorded goodwill of \$37.6 million. The goodwill is not deductible for income tax purposes.

Fiscal 2021

Bridgecrew Inc.

On March 2, 2021, we completed our acquisition of Bridgecrew Inc. (“Bridgecrew”), a privately-held cloud security company. We expect the acquisition will expand our Prisma Cloud offering to deliver security across the full application lifecycle. The total purchase consideration for the acquisition of Bridgecrew was \$156.9 million, which consisted of the following (in millions):

	Amount
Cash	\$ 155.9
Fair value of replacement awards	1.0
Total	\$ 156.9

As part of the acquisition, we issued \$42.5 million of replacement awards, of which the portion attributable to services performed prior to the acquisition date was allocated to purchase consideration. The remaining fair value was allocated to future services and will be expensed over the remaining service periods as share-based compensation.

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

	Amount
Goodwill	\$ 129.6
Identified intangible assets	21.6
Cash	9.0
Net liabilities assumed	(3.3)
Total	\$ 156.9

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

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

	Fair Value	Estimated Useful Life
Developed technology	\$ 21.6	6 years

Expansive Inc.

On December 15, 2020, we completed our acquisition of Expansive Inc. (“Expansive”), a privately-held company specializing in attack surface management. We expect the acquisition will enrich our Cortex offerings and provide organizations an integrated view of the enterprise to combine external, internal, and threat data. The total purchase consideration for the acquisition of Expansive was \$797.2 million, which consisted of the following (in millions):

	Amount
Cash	\$ 434.9
Common stock (1.1 million shares)	340.7
Fair value of replacement awards	21.6
Total	<u>\$ 797.2</u>

As part of the acquisition, we issued replacement equity awards, which included 0.2 million shares of our restricted common stock. The total fair value of the replacement equity awards was \$160.0 million, of which the portion attributable to services performed prior to the acquisition date was allocated to purchase consideration. The remaining fair value was allocated to future services and will be expensed over the remaining service periods as share-based compensation.

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

	Amount
Goodwill	\$ 598.2
Identified intangible assets	160.3
Cash	51.1
Net liabilities assumed	(12.4)
Total	<u>\$ 797.2</u>

Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating Expansive technology into our platforms. 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	\$ 123.4	6 years
Customer relationships	36.9	10 years
Total	<u>\$ 160.3</u>	

Sinefa Group, Inc.

On November 24, 2020, we completed our acquisition of Sinefa Group, Inc. and its wholly owned subsidiaries (“Sinefa”), a privately-held digital experience monitoring company. We expect the acquisition will extend our Prisma Access offering. The total purchase consideration for the acquisition of Sinefa was \$27.0 million, which consisted of the following (in millions):

	Amount
Cash	\$ 26.9
Fair value of replacement awards	0.1
Total	<u>\$ 27.0</u>

As part of the acquisition, we issued \$11.5 million of replacement equity awards, of which the portion attributable to services performed prior to the acquisition date was allocated to purchase consideration. The remaining fair value was allocated to future services and will be expensed over the remaining service periods as share-based compensation.

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

	Amount
Goodwill	\$ 13.7
Identified intangible assets	20.4
Net liabilities assumed	(7.1)
Total	<u>\$ 27.0</u>

Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating Sinefa technology into our platforms. The goodwill is 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	\$ 18.6	6 years
Customer relationships	1.8	8 years
Total	<u>\$ 20.4</u>	

The Crypsis Group

On September 17, 2020, we completed our acquisition of The Crypsis Group (“Crypsis”), an incident response, risk management, and digital forensics consulting firm. We expect the acquisition will expand our capabilities and strengthen our Cortex strategy. The total purchase consideration for the acquisition of Crypsis was \$227.7 million, which consisted of the following (in millions):

	Amount
Cash	\$ 225.7
Fair value of replacement awards	2.0
Total	<u>\$ 227.7</u>

As part of the acquisition, we issued \$27.1 million of replacement awards, of which the portion attributable to services performed prior to the acquisition date was allocated to purchase consideration. The remaining fair value was allocated to future services and will be expensed over the remaining service periods as share-based compensation.

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

	Amount
Goodwill	\$ 157.6
Identified intangible assets	54.4
Net assets acquired	15.7
Total	<u>\$ 227.7</u>

Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating Crypsis technology into our platforms. The goodwill is 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	\$ 6.9	3 years
Customer relationships	47.5	7 years
Total	<u>\$ 54.4</u>	

Fiscal 2020*CloudGenix Inc.*

On April 21, 2020, we completed our acquisition of CloudGenix, Inc. (“CloudGenix”), a privately-held company. We believe the acquisition will strengthen our secure access service edge (“SASE”) offering. The total purchase consideration for the acquisition of CloudGenix was \$402.7 million, which consisted of the following (in millions):

	Amount
Cash	\$ 396.1
Fair value of replacement awards	6.6
Total	\$ 402.7

As part of the acquisition, we issued \$30.3 million of replacement awards, of which the portion attributable to services performed prior to the acquisition date was allocated to purchase consideration. The remaining fair value was allocated to future services and will be expensed over the remaining service periods as share-based compensation.

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

	Amount
Goodwill	\$ 301.2
Identified intangible assets	109.9
Cash	8.3
Net liabilities assumed	(16.7)
Total	\$ 402.7

Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating CloudGenix technology into our portfolio. 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	\$ 67.2	5 years
Customer relationships	42.7	10 years
Total	\$ 109.9	

Aporeto, Inc.

On December 23, 2019, we completed our acquisition of Aporeto, Inc. (“Aporeto”), a privately-held machine identity-based microsegmentation company. We believe the acquisition will strengthen our cloud-native security platform capabilities delivered by Prisma Cloud. The total purchase consideration for the acquisition of Aporeto was \$144.1 million, which consisted of the following (in millions):

	Amount
Cash	\$ 139.8
Fair value of replacement awards	4.3
Total	\$ 144.1

As part of the acquisition, we issued \$16.4 million of replacement awards, of which the portion attributable to services performed prior to the acquisition date was allocated to purchase consideration. The remaining fair value was allocated to future services and will be expensed over the remaining service periods as share-based compensation.

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

	Amount
Goodwill	\$ 111.3
Identified intangible assets	23.8
Cash	10.5
Net liabilities assumed	(1.5)
Total	\$ 144.1

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

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

	Fair Value	Estimated Useful Life
Developed technology	\$ 20.5	7 years
Customer relationships	3.3	4 years
Total	\$ 23.8	

Zingbox, Inc.

On September 20, 2019, we completed our acquisition of Zingbox, Inc. ("Zingbox"), a privately-held Internet of Things ("IoT") security company. We believe the acquisition will accelerate our delivery of IoT security through our ML-Powered Next-Generation Firewall and Cortex offerings. The total purchase consideration for the acquisition of Zingbox was \$66.4 million in cash.

As part of the acquisition, we issued replacement equity awards with a total fair value of \$5.7 million, which will be expensed over the remaining service periods as share-based compensation.

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

	Amount
Goodwill	\$ 48.1
Identified intangible assets	20.4
Net liabilities assumed	(2.1)
Total	\$ 66.4

Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating Zingbox's technology into our portfolio. 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	\$ 18.6	5 years
Customer relationships	1.8	8 years
Total	\$ 20.4	

Additional Acquisition-Related Information

Pro forma results of operations have not been presented because the effects of the acquisitions were not material to our consolidated statements of operations.

Additional information related to our acquisitions completed in fiscal 2022, 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.

8. Goodwill and Intangible Assets

Goodwill

The following table presents details of our goodwill during the year ended July 31, 2022 (in millions):

	Amount
Balance as of July 31, 2021	\$ 2,710.1
Goodwill acquired	37.6
Balance as of July 31, 2022	<u>\$ 2,747.7</u>

Purchased Intangible Assets

The following table presents details of our purchased intangible assets (in millions):

	July 31,					
	2022			2021		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Intangible assets subject to amortization:						
Developed technology	\$ 600.7	\$ (347.9)	\$ 252.8	\$ 596.2	\$ (243.8)	\$ 352.4
Customer relationships	172.7	(52.2)	120.5	172.7	(30.6)	142.1
Acquired intellectual property	11.3	(4.8)	6.5	7.9	(3.8)	4.1
Trade name and trademarks	9.4	(9.4)	—	9.4	(9.4)	—
Other	0.9	(0.1)	0.8	1.8	(1.8)	—
Total intangible assets subject to amortization	795.0	(414.4)	380.6	788.0	(289.4)	498.6
Intangible assets not subject to amortization:						
In-process research and development	3.9	—	3.9	—	—	—
Total purchased intangible assets	<u>\$ 798.9</u>	<u>\$ (414.4)</u>	<u>\$ 384.5</u>	<u>\$ 788.0</u>	<u>\$ (289.4)</u>	<u>\$ 498.6</u>

We recognized amortization expense of \$126.9 million, \$117.8 million, and \$77.3 million for the years ended July 31, 2022, 2021, and 2020, respectively.

The following table summarizes estimated future amortization expense of our intangible assets subject to amortization as of July 31, 2022 (in millions):

	Total	Fiscal years ending July 31,					
		2023	2024	2025	2026	2027	2028 and Thereafter
Future amortization expense	\$ 380.6	\$ 101.1	\$ 91.1	\$ 77.4	\$ 55.6	\$ 28.5	\$ 26.9

9. Property and Equipment

The following table presents details of our property and equipment, net (in millions):

	July 31,	
	2022	2021
Computers, equipment, and software	\$ 404.3	\$ 352.1
Leasehold improvements	249.3	231.6
Land	87.2	49.6
Demonstration units	41.6	43.8
Furniture and fixtures	45.1	40.3
Total property and equipment, gross	827.5	717.4
Less: accumulated depreciation	(469.7)	(399.0)
Total property and equipment, net	<u>\$ 357.8</u>	<u>\$ 318.4</u>

During the year ended July 31, 2022, we purchased 4.6 acres of land adjacent to our headquarters in Santa Clara, California, along with the associated buildings, for \$39.5 million to accommodate future expansion of our headquarters. This amount was recorded in property and equipment, net on our consolidated balance sheet as of July 31, 2022.

We recognized depreciation expense of \$92.8 million, \$94.2 million, and \$96.0 million related to property and equipment during the years ended July 31, 2022, 2021, and 2020, respectively.

10. Debt

Convertible Senior Notes

In July 2018, we issued \$1.7 billion aggregate principal amount of 0.75% Convertible Senior Notes due 2023 (the “2023 Notes”) and, in June 2020, we issued \$2.0 billion aggregate principal amount of 0.375% Convertible Senior Notes due 2025 (the “2025 Notes,” and together with the 2023 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. The 2025 Notes bear interest at a fixed rate of 0.375% per year, payable semi-annually in arrears on June 1 and December 1 of each year, beginning on December 1, 2020. Each series of the convertible 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 2023 Notes and the 2025 Notes mature on July 1, 2023 and June 1, 2025, respectively. We cannot redeem the 2023 Notes prior to maturity. We may redeem for cash all or any portion of the 2025 Notes, at our option, on or after June 5, 2023, and prior to the 31st scheduled trading day immediately preceding the maturity date if the last reported sale price of our common stock has been at least 130% of the conversion price then in effect for at least 20 trading days during any 30 consecutive trading day period ending on and including the trading day preceding the date on which we provide notice of redemption. The redemption will be at a price equal to 100% of the principal amount of the 2025 Notes and adjusted for interest. If we call any or all of the 2025 Notes for redemption, holders may convert such 2025 Notes called for redemption at any time prior to the close of business on the second scheduled trading day immediately preceding the redemption date.

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

	Conversion Rate per \$1,000 Principal	Initial Conversion Price	Convertible Date	Initial Number of Shares
2023 Notes	3.7545	\$ 266.35	April 1, 2023	6.4
2025 Notes	3.3602	\$ 297.60	March 1, 2025	6.7

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, 2018 and October 31, 2020 for the 2023 Notes and the 2025 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 surrender all or any portion of their Notes for conversion 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, and such conversions will be settled upon the applicable maturity date. Upon conversion, holders of the Notes of a series will receive cash equal to the aggregate principal amount of the Notes of such series to be converted, and, at our election, cash and/or shares of our common stock for any amounts in excess of the aggregate principal amount of the Notes of such series being converted.

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

The sale price condition for the Notes was met during the fiscal quarter ended July 31, 2022, and as a result, holders may convert their Notes at any time during the fiscal quarter ending October 31, 2022. The net carrying amount of the Notes was classified as a current liability on our consolidated balance sheet as of July 31, 2022.

The sale price condition for the 2023 Notes was met during the fiscal quarter ended July 31, 2021, and as a result, holders may convert their 2023 Notes at any time during the fiscal quarter ending October 31, 2021. Accordingly, the net carrying amount of the 2023 Notes was classified as a current liability and the portion of the equity component representing the conversion option was classified as temporary equity on our consolidated balance sheet as of July 31, 2021. The sale price condition for the 2025 Notes was not met during the fiscal quarter ended July 31, 2021. Since the 2025 Notes were not convertible during the fiscal quarter ended October 31, 2021, the associated net carrying amount was classified as a long-term liability and the equity component was included in additional paid-in capital on our consolidated balance sheet as of July 31, 2021.

The following table sets forth the components of the Notes (in millions):

	July 31, 2022 ⁽¹⁾			July 31, 2021		
	2023 Notes	2025 Notes	Total	2023 Notes	2025 Notes	Total
Liability component:						
Principal	\$ 1,691.9	\$ 1,999.4	\$ 3,691.3	\$ 1,692.0	\$ 2,000.0	\$ 3,692.0
Less: debt discount and debt issuance costs, net of amortization	(2.6)	(11.9)	(14.5)	(134.1)	(331.9)	(466.0)
Net carrying amount	<u>\$ 1,689.3</u>	<u>\$ 1,987.5</u>	<u>\$ 3,676.8</u>	<u>\$ 1,557.9</u>	<u>\$ 1,668.1</u>	<u>\$ 3,226.0</u>
Equity component (including amounts classified as temporary equity)	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 315.0</u>	<u>\$ 403.0</u>	<u>\$ 718.0</u>

⁽¹⁾ As described in Note 1. Description of Business and Summary of Significant Accounting Policies, we adopted new debt guidance effective August 1, 2021, using a modified retrospective method, under which financial results reported in prior periods were not adjusted. Upon adoption, our convertible senior notes are accounted for entirely as a liability and measured at their amortized cost. Transaction costs related to the issuance of the notes are netted with the liability and are amortized on a straight-line basis, which approximates the effective interest rate method, to interest expense over the term of the notes.

The total estimated fair value of the 2023 Notes and 2025 Notes were \$3.2 billion and \$3.5 billion at July 31, 2022, respectively and \$2.6 billion and \$2.9 billion at July 31, 2021, respectively. The fair value was determined based on the closing trading price per \$100 of the applicable series of the Notes as of the last day of trading for the period. We consider the fair value of the Notes at July 31, 2022 and 2021 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.

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

	Year Ended July 31, 2022			Year Ended July 31, 2021			Year Ended July 31, 2020		
	2023 Notes	2025 Notes	Total	2023 Notes	2025 Notes	Total	2023 Notes	2025 Notes	Total
Contractual interest expense	\$ 12.7	\$ 7.5	\$ 20.2	\$ 12.7	\$ 7.5	\$ 20.2	\$ 12.7	\$ 1.1	\$ 13.8
Amortization of debt discount ⁽¹⁾	—	—	—	63.5	74.3	137.8	60.9	10.5	71.4
Amortization of debt issuance costs	2.8	4.4	7.2	2.3	2.8	5.1	2.1	0.4	2.5
Total interest expense recognized	<u>\$ 15.5</u>	<u>\$ 11.9</u>	<u>\$ 27.4</u>	<u>\$ 78.5</u>	<u>\$ 84.6</u>	<u>\$ 163.1</u>	<u>\$ 75.7</u>	<u>\$ 12.0</u>	<u>\$ 87.7</u>
Effective interest rate of the liability component	<u>0.9 %</u>	<u>0.6 %</u>		<u>5.2 %</u>	<u>5.4 %</u>		<u>5.2 %</u>	<u>5.4 %</u>	

⁽¹⁾ Upon adoption of the new debt guidance on August 1, 2021, the conversion option is no longer separately accounted for as debt discount. Our convertible senior notes are accounted for entirely as a liability.

Note Hedges

To minimize the impact of potential economic dilution upon conversion of our convertible senior notes, we entered into separate convertible note hedge transactions (the “2023 Note Hedges,” with respect to the 2023 Notes, the “2025 Note Hedges,” with respect to the 2025 Notes, and the 2023 Notes Hedges together with 2025 Note Hedges, the “Note Hedges”) with respect to our common stock concurrent with the issuance of each series of the Notes.

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

	Initial Number of Shares	Aggregate Purchase
2023 Note Hedges	6.4	\$ 332.0
2025 Note Hedges	6.7	\$ 370.8

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 the Notes, which are also subject to adjustment, and are exercisable upon conversion of the applicable series of the Notes. The Note Hedges will expire upon maturity of the applicable series of the 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 on our consolidated balance sheets.

Warrants

Separately, but concurrently with the issuance of each series of our convertible senior notes, we entered into transactions whereby we sold warrants (the “2023 Warrants,” with respect to the 2023 Notes, the “2025 Warrants,” with respect to the 2025 Notes, and the 2023 Warrants together with the 2025 Warrants, the “Warrants”) to acquire shares of our common stock, subject to anti-dilution adjustments. The 2023 Warrants and 2025 Warrants are exercisable beginning October 2023 and September 2025, respectively.

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

	Initial Number of Shares	Strike Price per Share	Aggregate Proceeds
2023 Warrants	6.4	\$ 417.80	\$ 145.4
2025 Warrants	6.7	\$ 408.47	\$ 202.8

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 on our consolidated balance sheets.

Revolving Credit Facility

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

The borrowings under the Credit Facility currently bear interest, at our option, at a base rate plus a spread of 0.00% to 0.75%, or an adjusted LIBO Rate plus a spread of 1.00% to 1.75%, in each case with such spread being determined based on our leverage ratio. We are obligated to pay an ongoing commitment fee on undrawn amounts at a rate of 0.125% to 0.250%, depending on our leverage ratio. In March 2021, the ICE Benchmark Administration, the administrator of LIBO Rate, announced that it will cease publication of LIBO Rate by June 2023. Under the terms of our Credit Facility, in the event of the discontinuance of the LIBO Rate, a mutually agreed-upon alternative benchmark rate will be established to replace the LIBO Rate, which may include the Secured Overnight Financing Rate (“SOFR”). We do not anticipate that the discontinuance of the LIBO Rate will materially impact our liquidity or financial position.

As of July 31, 2022, there were no amounts outstanding and we were in compliance with all covenants under the Credit Agreement.

11. Leases

We have entered into various non-cancelable operating leases primarily for our facilities with original lease periods expiring through the year ending July 31, 2032, with the most significant leases relating to corporate headquarters in Santa Clara.

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 current 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. Rental payments under the three lease agreements are approximately \$412.0 million over the lease term.

In September 2012, we entered into two lease agreements for a total of approximately 300,000 square feet of space in Santa Clara, California, which served as our previous corporate headquarters through August 2017, when we relocated to our current corporate campus. In December 2019, we terminated these leases prior to their expiration date. The early termination fee is \$25.0 million, payable in equal quarterly installments from April 2020 through July 2023. Upon termination, we recorded a decrease of \$13.6 million in operating lease liabilities based on the payment schedule of the early termination fee discounted by the incremental borrowing rate for the remaining payment term. We also decreased right-of-use assets by \$8.7 million upon surrendering possession of the properties. As a result, during the year ended July 31, 2020, we recorded a gain of \$3.1 million net of other related fees of \$1.8 million in general and administrative expense in our consolidated statements of operations.

During the years ended July 31, 2022, 2021 and 2020, our net cost for operating leases was \$89.7 million, \$75.2 million, and \$80.4 million, respectively, primarily consisting of operating lease costs of \$67.6 million, \$59.3 million, and \$63.5 million, respectively. Our net cost for operating leases also included variable lease costs, short-term lease costs and sublease income in the periods presented.

The following tables present additional information for our operating leases (in millions, except for years and percentages):

	Year Ended July 31,		
	2022	2021	2020
Operating cash flows used in payments of operating lease liabilities	\$ 81.5	\$ 81.7	\$ 78.3
Right-of-use assets obtained in exchange for new operating lease liabilities	\$ 33.0	\$ 48.6	\$ 28.4
	July 31, 2022	July 31, 2021	
Weighted-average remaining lease term	5.5 years	6.1 years	
Weighted-average discount rate	4.0 %	3.8 %	

The following table presents maturities of operating lease liabilities as of July 31, 2022 (in millions):

	Amount
Fiscal years ending July 31:	
2023	\$ 73.5
2024	66.6
2025	64.5
2026	62.1
2027	56.0
2028 and thereafter	57.4
Total operating lease payments	380.1
Less: imputed interest	(41.7)
Present value of operating lease liabilities	\$ 338.4
Current portion of operating lease liabilities ⁽¹⁾	\$ 62.3
Long-term operating lease liabilities	\$ 276.1

⁽¹⁾ Current portion of operating lease liabilities is included in accrued and other liabilities on our consolidated balance sheet.

As of July 31, 2022, we have additional non-cancelable operating leases for office space that had been signed but had not yet commenced with total future minimum lease payments of \$26.0 million. These leases will commence in fiscal 2023, with lease terms ranging from three to ten years.

12. Commitments and Contingencies

Purchase Commitments

Manufacturing Purchase Commitments

In order to reduce manufacturing lead times and plan for adequate supply, we enter into agreements with manufacturing partners and component suppliers to procure inventory based on our demand forecasts. The following table presents details of the aggregate future minimum or fixed purchase commitments under these arrangements excluding obligations under contracts that we can cancel without a significant penalty as of July 31, 2022 (in millions):

	Total	Fiscal years ending July 31,					2028 and Thereafter
		2023	2024	2025	2026	2027	
Manufacturing purchase commitments	\$ 331.7	\$ 226.7	\$ 30.0	\$ 35.0	\$ 40.0	\$ —	\$ —

Other Purchase Commitments

We have entered into various non-cancelable agreements with certain service providers, under which we are committed to minimum or fixed purchases. The following table presents details of the aggregate future non-cancelable purchase commitments under these agreements as of July 31, 2022 (in millions):

	Total	Fiscal years ending July 31,					2028 and Thereafter
		2023	2024	2025	2026	2027	
Other purchase commitments	\$ 1,881.4	\$ 82.7	\$ 368.5	\$ 413.9	\$ 531.6	\$ 483.9	\$ 0.8

Additionally, we have a \$162.2 million minimum purchase commitment with a service provider through September 2027 with no specified annual commitments.

Mutual Covenant Not to Sue and Release Agreement

In January 2020, we executed a Mutual Covenant Not to Sue and Release Agreement for \$50.0 million to extend an existing covenant not to sue for seven years. As the primary benefit of the arrangement was attributable to future use, the amount was recorded in other assets on our consolidated balance sheets and is amortized to cost of product revenue in our consolidated statements of operations over the estimated period of benefit of seven years.

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, 2022, 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.

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.

13. Stockholders' Equity

Share Repurchase Program

In February 2019, our board of directors authorized a \$1.0 billion share repurchase program, which is funded from available working capital. In December 2020 and August 2021, our board of directors authorized additional \$700.0 million and \$676.1 million increases to this share repurchase program, respectively, bringing the total authorization under this share repurchase program to \$2.4 billion (our "current authorization"). The expiration date of our current authorization was extended to December 31, 2022, and our repurchase program may be suspended or discontinued at any time. 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 following table summarizes the share repurchase activity under our share repurchase program (in millions, except per share amounts):

	Year Ended July 31,		
	2022	2021	2020
Number of shares repurchased	1.8	4.0	0.9
Weighted average price per share ⁽¹⁾	\$ 512.49	\$ 294.87	\$ 209.12
Aggregate purchase price ⁽¹⁾	\$ 915.0	\$ 1,178.1	\$ 198.1

⁽¹⁾ Includes transaction costs

As of July 31, 2022, \$85.0 million remained available for future share repurchases under our current repurchase authorization. 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.

Accelerated Stock Repurchase

In February 2020, our board of directors approved the repurchase of \$1.0 billion of our common stock through an accelerated share repurchase ("ASR") transaction with a financial institution. This ASR transaction was in addition to our share repurchase program.

During the fiscal year ended July 31, 2020, we completed the ASR transaction with an aggregate of 5.2 million shares of our common stock repurchased and retired. The total price of the ASR transaction is reflected as a reduction to common stock and additional paid-in capital on our consolidated balance sheet.

14. Equity Award Plans

Share-Based Compensation Plans

Equity Incentive Plans

Our 2021 Equity Incentive Plan (our "2021 Plan") became effective in December 2021 and replaced our 2012 Equity Incentive Plan (our "2012 Plan"). Our 2021 Plan provides for the granting of stock options, stock appreciation rights, restricted stock awards ("RSAs"), restricted stock units ("RSUs"), performance shares ("PSAs"), performance-based stock units ("PSUs") and performance stock options ("PSOs") to our employees, directors, and consultants. Upon effectiveness of the 2021 Plan, the 2012 Plan was terminated and no further awards will be granted under the 2012 Plan. Awards that were outstanding upon such termination remained outstanding pursuant to their original terms, and any subsequent expiration, cancellation or forfeiture of awards under our 2012 Plan are returned to our 2021 Plan.

The majority of our equity awards are RSUs, which generally vest over a period of three to four years from the date of grant. 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. Our options expire no more than ten years after the date of grant.

We grant PSUs to certain employees, which vest over a period of one to four years from the date of grant. The actual number of PSUs earned and eligible to vest is determined based on the level of achievement against revenue growth, pre-established billings and operating margin goals, or pre-defined individual performance targets for the fiscal year, and market conditions, if applicable. During the year ended July 31, 2022, we granted 0.1 million shares of PSUs, which contain service, performance and market conditions. The performance condition is based on revenue growth, whereas the market condition measures our total shareholder return ("TSR") relative to the TSR of the companies listed in the Standard & Poor's 500 index. In addition to this grant, we have also approved the future grant of 0.1 million shares of PSUs with similar terms, which will be considered granted at the time their related vesting conditions are established in the next two years.

We have also granted PSOs with both a market condition and a service condition to certain executives. The market condition for PSOs granted in the fiscal years 2018 and 2019 requires the price of our common stock to equal or exceed \$297.75, \$397.00, \$496.25, and \$595.50 based on the average closing price for 30 consecutive trading days during the four-, five-, six-, and seven-and-a-half-year periods following the date of grant in fiscal year 2018 and 2019, respectively. The market condition for PSOs granted in the fiscal year 2021 requires the price of our common stock to equal or exceed \$397.00, \$496.25, \$595.50 and \$700.00 based on the average closing price for 30 consecutive trading days during the three-, four-, five-, and six-and-a-half-year periods following the date of grant. All of the PSOs granted in the fiscal year 2021 were forfeited in the same fiscal year and are no longer outstanding. To the extent that the market condition has been met, one-fourth of the PSOs will vest on each anniversary date of the grant date for such PSOs, subject to continued service. All outstanding PSOs may be exercised prior to vesting (“early exercise”). Shares of common stock issued upon early exercise of the PSOs will be restricted and, at our option, subject to repurchase if the option holder ceases to be a service provider. The maximum contractual term of our outstanding PSOs is seven and a half years from the date of grant, depending on vesting period. As of July 31, 2022, all stock price targets for our outstanding PSOs have been satisfied.

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 2021 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 13.1 million shares of our common stock are reserved for issuance pursuant to our equity incentive plans as of July 31, 2022.

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 initial public offering (“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. Shares purchased under our 2012 ESPP during the fiscal years ended July 31, 2022, 2021 and 2020 were 0.7 million, 0.6 million and 0.6 million, at an average exercise price of \$192.81 per share, \$161.07 per share and \$146.90 per share respectively.

A total of 4.9 million shares of our common stock are available for sale under our 2012 ESPP as of July 31, 2022. 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.

Assumed Share-Based Compensation Plans

In connection with our acquisitions, we have assumed equity incentive plans of certain acquired companies (collectively “the Assumed Plans”). The equity awards assumed in connection with each acquisition were granted from their respective assumed plans. The assumed equity awards will be settled in shares of our common stock and will retain the terms and conditions under which they were originally granted. No additional equity awards will be granted under and forfeited awards will not be returned to the Assumed Plans. Refer to Note 7. Acquisitions for more information on our acquisitions and the related equity awards assumed.

Stock Option Activities

The following table summarizes the stock option and PSO activity under our stock plans during the years ended July 31, 2022, 2021, and 2020 (in millions, except per share amounts):

	Stock Options Outstanding				PSOs Outstanding			
	Number of Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value	Number of Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Balance—July 31, 2019	0.3	\$ 14.53	2.2	\$ 81.4	3.7	\$ 193.99	6.2	\$ 120.1
Exercised	(0.2)	\$ 11.46			—	\$ —		
Forfeited	—	\$ —			(0.9)	\$ 193.51		
Balance—July 31, 2020	0.1	\$ 19.59	1.5	\$ 34.2	2.8	\$ 194.14	5.2	\$ 170.9
Granted	—	\$ —			0.2	\$ 304.29		
Exercised	0.0	\$ 12.82			—	\$ —		
Forfeited	—	\$ 7.84			(0.2)	\$ 304.29		
Balance—July 31, 2021	0.1	\$ 26.20	0.8	\$ 27.4	2.8	\$ 194.14	4.2	\$ 566.8
Exercised	(0.1)	\$ 18.72			—	\$ —		
Forfeited	—	\$ —			(0.1)	\$ 184.24		
Balance—July 31, 2022	<u>0.0</u>	\$ 55.36	0.5	\$ 6.7	<u>2.7</u>	\$ 194.55	3.2	\$ 809.3
Exercisable—July 31, 2022	<u>0.0</u>	\$ 55.36	0.5	\$ 6.7	<u>2.7</u>	\$ 194.55	3.2	\$ 809.3

The weighted-average grant-date fair value of PSOs granted during the year ended July 31, 2021 was \$82.12 per share. The intrinsic value of options exercised during the years ended July 31, 2022, 2021, and 2020 was \$29.2 million, \$22.2 million and \$50.2 million, respectively.

RSU and PSU Activities

The following table summarizes the RSU and PSU activity under our stock plans during the years ended July 31, 2022, 2021, and 2020 (in millions, except per share amounts):

	RSUs Outstanding			PSUs Outstanding		
	Number of Shares	Weighted-Average Grant-Date Fair Value Per Share	Aggregate Intrinsic Value	Number of Shares	Weighted-Average Grant-Date Fair Value Per Share	Aggregate Intrinsic Value
Balance—July 31, 2019	6.9	\$ 188.16	\$ 1,554.0	0.3	\$ 197.86	\$ 67.0
Granted ⁽¹⁾⁽²⁾	3.5	\$ 211.38		0.4	\$ 248.55	
Vested ⁽³⁾	(2.8)	\$ 181.19		(0.1)	\$ 166.90	
Forfeited	(1.0)	\$ 188.18		0.0	\$ 175.88	
Balance—July 31, 2020	6.6	\$ 203.30	\$ 1,688.1	0.6	\$ 231.42	\$ 147.2
Granted ⁽¹⁾⁽²⁾	4.1	\$ 297.89		0.8	\$ 321.45	
Vested ⁽³⁾	(2.9)	\$ 200.91		(0.1)	\$ 195.60	
Forfeited	(0.9)	\$ 226.79		0.0	\$ 235.98	
Balance—July 31, 2021	6.9	\$ 257.56	\$ 2,760.2	1.3	\$ 292.93	\$ 498.4
Granted ⁽¹⁾	1.9	\$ 494.54		0.3	\$ 351.14	
Vested ⁽³⁾	(3.0)	\$ 257.07		(0.4)	\$ 250.42	
Forfeited	(0.9)	\$ 286.49		(0.2)	\$ 321.92	
Balance—July 31, 2022	4.9	\$ 346.54	\$ 2,456.9	1.0	\$ 319.15	\$ 513.7

⁽¹⁾ For PSUs, shares granted represent the aggregate maximum number of shares that may be earned and issued with respect to these awards over their full terms.

⁽²⁾ Includes 0.4 million RSUs assumed in connection with the acquisitions of Crypsis, Sinefa, Expanse and Bridgecrew, with weighted-average grant-date fair value of \$241.43, \$297.17, \$317.45 and \$354.66, respectively, for the year ended July 31, 2021, and 0.1 million RSUs assumed in connection with the acquisitions of Zingbox, Aporeto and CloudGenix, with weighted-average grant-date fair value of \$208.25, \$231.30 and \$181.48, respectively, for the year ended July 31, 2020.

⁽³⁾ Includes time-based vesting for PSUs.

The aggregate fair value, as of the respective vesting dates, of RSUs vested during the years ended July 31, 2022, 2021, and 2020 was \$1.6 billion, \$986.4 million, and \$615.7 million, respectively. The aggregate fair value, as of the respective vesting dates, of PSUs vested during the year ended July 31, 2022, 2021, and 2020 was \$184.0 million, \$20.8 million and \$11.9 million, respectively.

Shares Available for Grant

The following table presents the stock activity and the total number of shares available for grant under our equity incentive plans as of July 31, 2022 (in millions):

	Number of shares
Balance—July 31, 2021	11.3
Authorized	8.8
Cancelled upon effectiveness of the 2021 Plan	(14.6)
RSUs and PSUs granted	(2.2)
PSOs, RSUs, and PSUs forfeited	1.2
Shares withheld for taxes	0.1
Balance—July 31, 2022	4.6

Share-Based Compensation

We record share-based compensation awards based on estimated fair value as of the grant date. The fair value of RSUs and PSUs not subject to market conditions is based on the closing market price of our common stock on the date of grant.

The fair value of the PSUs subject to the market condition is estimated on the grant date using a Monte Carlo simulation model. No such PSUs were granted during the years ended July 31, 2021 or 2020. The following table summarizes the assumptions used and the resulting grant-date fair value of our PSUs subject to the market condition granted during the year ended July 31, 2022:

	Year Ended July 31, 2022
Volatility	36.0% - 41.1%
Expected term (in years)	1.4 - 3.0
Dividend yield	— %
Risk-free interest rate	0.2% - 2.0%
Grant-date fair value per share	\$411.49 - \$782.13

The expected volatility is based on the historical volatility of our common stock. The expected term is based on the length of each tranche's performance period from the grant date. The dividend yield assumption is based on our current 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 fair value of PSOs is estimated on the grant date using a Monte Carlo simulation model, which predicts settlement of the options midway between the vesting term and the contractual term. No PSOs were granted during the years ended July 31, 2022 or 2020. The following table summarizes the assumptions used and the resulting grant-date fair values of our PSOs granted during the year ended July 31, 2021:

	Year Ended July 31, 2021
Volatility	35.9 %
Dividend yield	— %
Risk-free interest rate	0.6 %
Weighted-average grant-date fair value per share	\$ 82.12

The expected volatility is based on a combination of implied volatility from traded options on our common stock and the historical volatility of our common stock. The dividend yield assumption is based on our current 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 terms equal to the contractual terms of each tranche.

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,		
	2022	2021	2020
Volatility	33.6% - 39.4%	34.9% - 42.6%	31.0% - 35.7%
Expected term (in years)	0.5 - 2.0	0.5 - 2.0	0.5 - 2.0
Dividend yield	— %	— %	— %
Risk-free interest rate	0.1% - 1.4%	0.1%	0.9% - 1.9%
Grant-date fair value per share	\$112.76 - \$222.30	\$69.48 - \$129.05	\$46.75 - \$66.47

The expected volatility is based on a combination of implied volatility from traded options on our common stock and 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 current 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,		
	2022	2021	2020
Cost of product revenue	\$ 9.3	\$ 6.2	\$ 5.7
Cost of subscription and support revenue	110.2	93.0	77.7
Research and development	471.1	428.9	274.6
Sales and marketing	304.7	269.9	214.5
General and administrative	118.1	128.9	92.0
Total share-based compensation	\$ 1,013.4	\$ 926.9	\$ 664.5

As of July 31, 2022, total compensation cost related to unvested share-based awards not yet recognized was \$1.8 billion. This cost is expected to be amortized over a weighted-average period of approximately 2.6 years. Future grants will increase the amount of compensation expense to be recorded in these periods.

15. Income Taxes

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

	Year Ended July 31,		
	2022	2021	2020
United States	\$ (152.3)	\$ (482.2)	\$ (56.1)
Foreign	(54.9)	17.2	(175.7)
Total	\$ (207.2)	\$ (465.0)	\$ (231.8)

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

	Year Ended July 31,		
	2022	2021	2020
Federal:			
Current	\$ 2.6	\$ 3.3	\$ 3.8
Deferred	(0.3)	(5.9)	(1.3)
State:			
Current	1.5	1.7	1.3
Deferred	0.1	0.1	0.1
Foreign:			
Current	58.8	41.3	39.2
Deferred	(2.9)	(6.6)	(7.9)
Total	\$ 59.8	\$ 33.9	\$ 35.2

For the year ended July 31, 2022, our provision for income taxes increased compared to the year ended July 31, 2021, primarily due to foreign income and withholding taxes.

For the year ended July 31, 2021, our provision for income taxes decreased slightly compared to the year ended July 31, 2020, primarily due to tax benefits from changes in our valuation allowances.

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,		
	2022	2021	2020
Federal statutory rate	21.0 %	21.0 %	21.0 %
Effect of:			
State taxes, net of federal tax benefit	2.7	1.3	3.0
Effects of non-U.S. operations	(16.5)	(3.1)	667.5
Change in valuation allowance	(158.7)	(40.7)	(714.1)
Share-based compensation	83.6	5.0	(5.1)
Tax credits	41.5	9.9	17.9
Non-deductible expenses	(2.5)	(1.3)	(3.9)
Other, net	—	0.6	(1.5)
Total	(28.9)%	(7.3)%	(15.2)%

In fiscal 2020, we transferred certain intellectual property rights to a wholly owned United Kingdom subsidiary, primarily to align our legal structure to our evolving operations. The tax benefit from an increase in the tax basis of intellectual property rights resulted in an increase in effects of non-U.S. operations and was fully offset by a full valuation.

The following table presents the components of our deferred tax assets and liabilities as of July 31, 2022 and 2021 (in millions):

	July 31,	
	2022	2021
Deferred tax assets:		
Accruals and reserves	\$ 227.1	\$ 125.0
Deferred revenue	475.5	364.9
Net operating loss carryforwards	759.1	556.7
Tax credits	317.4	230.8
Share-based compensation	59.2	53.9
Fixed assets and intangible assets	1,742.6	1,789.6
Interest carryforward	55.8	19.2
Gross deferred tax assets	3,636.7	3,140.1
Valuation allowance	(3,414.1)	(2,933.3)
Total deferred tax assets	222.6	206.8
Deferred tax liabilities:		
Deferred contract costs	(183.6)	(165.4)
Other deferred tax liabilities	(27.8)	(32.3)
Total deferred tax liabilities	(211.4)	(197.7)
Net deferred tax assets	\$ 11.2	\$ 9.1

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, 2022, we have provided a valuation allowance for our federal, state, United Kingdom and certain other foreign deferred tax assets that we believe will, more likely than not, be unrealizable. The net valuation allowance increased by \$0.5 billion from the year ended July 31, 2021 to the year ended July 31, 2022, primarily due to an increase in our NOL carryforwards and deferred revenue as a result of current year operations.

As of July 31, 2022, we had federal, state, and foreign NOL carryforwards of approximately \$2.0 billion, \$1.0 billion, and \$1.8 billion, 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, 2033 and July 31, 2023, respectively. Our foreign NOL will carry forward indefinitely.

As of July 31, 2022, we had federal and state research and development tax credit carryforwards of approximately \$243.8 million and \$197.4 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, 2022, we had foreign tax credit carryforwards of \$3.5 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, 2023.

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.

As of July 31, 2022, we had \$414.0 million of unrecognized tax benefits, \$76.1 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, 2021, we had \$372.9 million of unrecognized tax benefits, \$68.7 million of which would affect income tax expense if recognized, after consideration of our valuation allowance in the United States and other assets. We do not expect the amount of unrecognized tax benefits as of July 31, 2022 to materially change over the next 12 months.

We file federal, state, and foreign income tax returns in jurisdictions with varying statutes of limitations. Generally, all years remain subject to adjustment due to our NOL and credit carryforwards. We currently have ongoing tax audits in various jurisdictions and at various times. The primary focus of these audits is, generally, profit allocation. The ultimate amount and timing of any future settlements cannot be predicted with reasonable certainty.

We recognize both interest and penalties associated with uncertain tax positions as a component of income tax expense. During the years ended July 31, 2022, 2021, and 2020, we recognized income tax expense related to interest and penalties of \$5.2 million, \$3.5 million, and \$1.6 million, respectively. We had accrued interest and penalties on our consolidated balance sheets related to unrecognized tax benefits of \$20.9 million and \$15.7 million as of July 31, 2022 and 2021, respectively.

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

	Year Ended July 31,		
	2022	2021	2020
Unrecognized tax benefits at the beginning of the period	\$ 372.9	\$ 326.4	\$ 314.5
Additions for tax positions taken in prior years	3.5	26.5	3.2
Reductions for tax positions taken in prior years	(7.4)	(2.5)	(1.6)
Additions for tax positions taken in the current year	45.0	22.5	10.3
Unrecognized tax benefits at the end of the period	<u>\$ 414.0</u>	<u>\$ 372.9</u>	<u>\$ 326.4</u>

During the year ended July 31, 2022 and 2021, our additions for tax positions taken in the given year were primarily attributable to uncertain tax positions related to tax credits.

During the year ended July 31, 2020, our additions for tax positions taken in the given year were primarily attributable to intercompany transactions.

As of July 31, 2022, 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 are not material.

16. 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,		
	2022	2021	2020
Net loss	\$ (267.0)	\$ (498.9)	\$ (267.0)
Weighted-average shares used to compute net loss per share, basic and diluted	98.5	96.4	96.9
Net loss per share, basic and diluted	<u>\$ (2.71)</u>	<u>\$ (5.18)</u>	<u>\$ (2.76)</u>

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,		
	2022	2021	2020
Convertible senior notes	13.1	13.1	13.1
Warrants related to the issuance of convertible senior notes	13.1	13.1	13.1
RSUs and PSUs	5.9	8.2	7.2
Options to purchase common stock, including PSOs	2.7	2.9	2.9
RSAs and PSAs	0.1	0.3	0.1
ESPP shares	0.2	0.3	0.3
Total	35.1	37.9	36.7

17. Other Income, Net

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

	Year Ended July 31,		
	2022	2021	2020
Interest income	\$ 15.6	\$ 8.5	\$ 41.4
Foreign currency exchange gains (losses), net	1.8	(5.4)	(6.7)
Other	(8.4)	(0.7)	1.2
Total other income, net	\$ 9.0	\$ 2.4	\$ 35.9

18. Segment Information

We conduct business globally and sales 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 our long-lived assets, which consist of property and equipment, net and operating lease right-of-use assets, by geographic region (in millions):

	Year Ended July 31,	
	2022	2021
Long-lived assets:		
United States	\$ 446.1	\$ 461.1
Israel	55.4	61.9
Other countries	98.3	58.3
Total long-lived assets	\$ 599.8	\$ 581.3

Refer to Note 2. Revenue for revenue by geographic theater and revenue for groups of similar products and services for the years ended July 31, 2022, 2021, and 2020.

19. Subsequent Events

Share Repurchase

On August 19, 2022, our board of directors authorized a \$915.0 million increase to our share repurchase program under the current authorization, bringing the total remaining authorization for future share repurchases 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, 2023, and may be suspended or discontinued at any time without prior notice.

Stock Split Effected in the Form of a Stock Dividend ("Stock Split")

On August 22, 2022, we announced that our board of directors had approved a three-for-one stock split of our outstanding shares of common stock to be effected in the form of a stock dividend. Each stockholder of record at the close of business on September 6, 2022 (the "record date"), will receive, after the close of business on September 13, 2022, two additional shares for every share held on the record date, and trading will begin on a split-adjusted basis on September 14, 2022.

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, 2022, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in 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

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act. Our management assessed the effectiveness of our internal control over financial reporting as of July 31, 2022, 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, 2022, our internal control over financial reporting was effective.

The effectiveness of our internal control over financial reporting as of July 31, 2022 has been audited by Ernst & Young LLP, the independent registered public accounting firm that audits our consolidated financial statements, as stated in their report which is included in Part II, Item 8 of this Annual Report on Form 10-K.

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, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Not applicable.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item will be contained in our definitive proxy statement to be filed with the SEC in connection with our 2022 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, 2022, 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.

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.	8-K	001-35594	3.1	May 23, 2022
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	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
4.2	Indenture between the Registrant and U.S. Bank National Association, dated as of June 8, 2020.	8-K	001-35594	4.1	June 8, 2020
4.3	Form of Global 0.75% Convertible Senior Note due 2023 (included in Exhibit 4.1).	8-K	001-35594	4.2	July 13, 2018
4.4	Form of Global 0.375% Convertible Senior Note due 2023 (included in Exhibit 4.1).	8-K	001-35594	4.2	June 8, 2020
4.5	Description of Registrant’s Securities.				
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*	2012 Equity Incentive Plan and related form agreements.	10-Q	001-35594	10.2	November 26, 2019
10.3*	Form of 2012 Equity Incentive Plan Performance-Based Restricted Stock Unit Award Agreement	10-Q	001-35594	10.4	November 19, 2021
10.4*	2021 Equity Incentive Plan	S-8	333-261697	99.1	December 16, 2021
10.5*	Form of 2021 Equity Incentive Plan Global Stock Option Award Agreement	S-8	333-261697	99.2	December 16, 2021
10.6*	Form of 2021 Equity Incentive Plan Global Restricted Stock Unit Award Agreement	S-8	333-261697	99.3	December 16, 2021
10.7*	2012 Employee Stock Purchase Plan, as amended and restated, and related form agreements.				
10.8*	RedLock Inc. 2015 Stock Plan, as amended, and related form agreements under RedLock Inc. 2015 Stock Plan, as amended.	S-8	333-227901	99.1	October 19, 2018
10.9*	Demisto, Inc. 2015 Stock Option Plan, as amended.	S-8	333-230663	99.1	April 1, 2019

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.10*	Twistlock Ltd. Amended and Restated 2015 Share Option Plan.	S-8	333-232672	99.1	July 16, 2019
10.11*	Zingbox, Inc. Stock Incentive Plan, as amended and restated.	S-8	333-234059	99.1	October 2, 2019
10.12*	Aporeto, Inc. Amended and Restated 2015 Stock Option and Grant Plan.	S-8	333-235854	99.1	January 8, 2020
10.13*	CloudGenix Inc. 2013 Equity Incentive Plan.	S-8	333-238014	99.1	May 5, 2020
10.14*	Crypsis Group Holdings, LLC 2017 Equity Incentive Plan.	S-8	333-249387	99.1	October 8, 2020
10.15*	Sinefa Group, Inc. 2020 Stock Plan.	S-8	333-251423	99.1	December 17, 2020
10.16*	Expanse Holding Company, Inc. Amended and Restated 2012 Stock Incentive Plan.	S-8	333-251425	99.1	December 17, 2020
10.17*	Gamma Networks, Inc. 2018 Stock Option and Grant Plan	S-8	333-259327	99.1	September 3, 2021
10.18*	Bridgecrew, Inc. 2019 Stock Incentive Plan.	S-8	333-254042	99.1	March 9, 2021
10.19*	Employee Incentive Compensation Plan, as amended and restated.	10-Q	001-35594	10.2	November 25, 2014
10.20*	Clawback Policy, adopted as of August 29, 2017.	10-Q	001-35594	10.3	November 21, 2017
10.21*	Amended and Restated Outside Director Compensation Policy (last amended February 16, 2022)	10-Q	001-35594	10.4	February 23, 2022
10.22*	Continued Service Policy	10-Q	001-35594	10.3	May 20, 2022
10.23*	Palo Alto Networks, Inc. Deferred Compensation Plan effective June 1, 2022				
10.24*	New Offer Letter between the Registrant and Mark D. McLaughlin, dated May 31, 2018.	8-K	001-35594	10.1	June 4, 2018
10.25*	Employment Agreement between Palo Alto Networks (Israel Analytics) Ltd. and Nir Zuk, dated August 18, 2020.	10-Q	001-35594	10.1	November 19, 2020
10.26*	Offer Letter between the Registrant and Nikesh Arora, dated May 30, 2018.	8-K	001-35594	10.1	June 4, 2018
10.27*	Offer Letter between the Registrant and Josh Paul, dated August 5, 2021.	8-K	001-35594	10.1	September 8, 2021
10.28*	Confirmatory Employment Letter with Updated Change in Control Protection between the Registrant and Lee Klarich, dated December 19, 2011.	10-Q	001-35594	10.4	November 30, 2018
10.29*	Addendum to Employment Offer Letter by and between the Registrant and Dipak Golechha, dated March 17, 2021.	8-K	001-35594	10.1	March 19, 2021
10.30*	Addendum to Employment Offer Letter by and between the Registrant and Dipak Golechha, dated February 18, 2022.	10-Q	001-35594	10.1	May 20, 2022
10.31*	Employment Offer Letter by and between the Registrant and William “BJ” Jenkins, dated July 27, 2021.	8-K	001-35594	10.1	August 12, 2021
10.32*	Addendum to Employment Offer Letter between the Registrant and William “BJ” Jenkins dated February 18, 2022.	10-Q	001-35594	10.2	May 20, 2022

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.33 *	Offer Letter between the Registrant and Amit K. Singh, dated October 11, 2018.	8-K	001-35594	10.1	October 15, 2018
10.34 *	Addendum to Employment Offer Letter by and between the Registrant and Amit Singh, dated October 19, 2021.	10-Q	001-35594	10.2	November 19, 2021
10.35 *	Second Addendum to Employment Offer Letter by and between the Registrant and Amit Singh, dated January 28, 2022.	10-Q	001-35594	10.5	February 23, 2022
10.36 *	Form of Offer Letter between the Registrant and its directors.	10-K	001-35594	10.27	September 3, 2021
10.37 **	Amended and Restated Flextronics Manufacturing Services Agreement, by and between the Registrant and Flextronics Telecom Systems Ltd., dated April 1, 2019.	10-Q	001-35594	10.1	May 30, 2019
10.38	Vendor Information Security Terms between the Registrant and Flextronics Telecom Systems Ltd. dated July 23, 2021	10-K	001-35594	10.29	September 3, 2021
10.39	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
10.40	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
10.41	Form of Convertible Note Hedge Confirmation.	8-K	001-35594	10.2	July 13, 2018
10.42	Form of Warrant Confirmation.	8-K	001-35594	10.3	July 13, 2018
10.43	Purchase Agreement, dated June 3, 2020, by and among the Registrant and Morgan Stanley & Co. LLC and Citigroup Global Markets Inc., as representatives of the several Initial Purchasers named therein.	8-K	001-35594	10.1	June 8, 2020
10.44	Form of Convertible Note Hedge Confirmation.	8-K	001-35594	10.2	June 8, 2020
10.45	Form of Warrant Confirmation.	8-K	001-35594	10.3	June 8, 2020
10.46	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
10.47	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
10.48	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
10.49	Lease by and between the Registrant and Santa Clara Campus Property Owner I LLC, dated October 7, 2015.	8-K/A	001-35594	10.1	October 19, 2015
10.50	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
10.51	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
10.52	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
10.53	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	10.2	November 22, 2016

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.54	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
10.55	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
10.56	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
10.57	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
10.58	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
10.59	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
10.60	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
10.61	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
10.62	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
10.63	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
10.64	Credit Agreement, dated as of September 4, 2018, by and among the Registrant, the lenders from time to time party thereto and Citibank, N.A., as administrative agent.	8-K	001-35594	10.1	September 6, 2018
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.				

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
101.DEF	XBRL Taxonomy Definition Linkbase Document.				
101.LAB	XBRL Taxonomy Labels Linkbase Document.				
101.PRE	XBRL Taxonomy Presentation Linkbase Document.				
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)				

* Indicates a management contract or compensatory plan or arrangement.

** Certain portions of this exhibit have been omitted as the Registrant has determined (i) the omitted information is not material and (ii) the omitted information would likely cause harm to the Registrant if publicly disclosed.

† 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.

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 6, 2022.

**PALO ALTO
NETWORKS, INC.**

By: /s/ NIKESH ARORA

Nikesh Arora
*Chairman and Chief
Executive Officer*

POWER OF ATTORNEY

KNOW ALL THESE PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Nikesh Arora, Dipak Golechha, and Josh Paul, 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
<u>/s/ NIKESH ARORA</u> Nikesh Arora	Chairman, Chief Executive Officer and Director (Principal Executive Officer)	September 6, 2022
<u>/s/ DIPAK GOLECHHA</u> Dipak Golechha	Chief Financial Officer (Duly Authorized Officer and Principal Financial Officer)	September 6, 2022
<u>/s/ JOSH PAUL</u> Josh Paul	Chief Accounting Officer (Duly Authorized Officer and Principal Accounting Officer)	September 6, 2022
<u>/s/ MARK D. MCLAUGHLIN</u> Mark D. McLaughlin	Vice Chairman and Director	September 6, 2022
<u>/s/ NIR ZUK</u> Nir Zuk	Chief Technology Officer and Director	September 6, 2022
<u>/s/ APARNA BAWA</u> Aparna Bawa	Director	September 6, 2022
<u>/s/ ASHEEM CHANDNA</u> Asheem Chandna	Director	September 6, 2022
<u>/s/ JOHN M. DONOVAN</u> John M. Donovan	Director	September 6, 2022
<u>/s/ CARL ESCHENBACH</u> Carl Eschenbach	Director	September 6, 2022
<u>/s/ DR. HELENE D. GAYLE</u> Dr. Helene D. Gayle	Director	September 6, 2022
<u>/s/ JAMES J. GOETZ</u> James J. Goetz	Director	September 6, 2022
<u>/s/ RT HON SIR JOHN KEY</u> Rt Hon Sir John Key	Director	September 6, 2022
<u>/s/ MARY PAT MCCARTHY</u> Mary Pat McCarthy	Director	September 6, 2022
<u>/s/ LORRAINE TWOHILL</u> Lorraine Twohill	Director	September 6, 2022

DESCRIPTION OF REGISTRANT'S SECURITIES

The following is a summary of information concerning the capital stock of Palo Alto Networks, Inc. (the "Company," "we," "us" or "our") and certain provisions of our restated certificate of incorporation ("COI") and amended and restated bylaws ("Bylaws") as they are currently in effect. This summary does not purport to be complete and does not contain all the information that may be important to you. This summary is qualified in its entirety by the provisions of our COI and Bylaws, each previously filed with the Securities and Exchange Commission and incorporated by reference as an exhibit to the Annual Report on Form 10-K, of which this Exhibit 4.5 is a part, as well as the applicable provisions of the Delaware General Corporate Law (the "DGCL"). We encourage you to read our COI, Bylaws, and to the applicable provisions of the DGCL carefully.

General

Our authorized capital stock consists of 1,100,000,000 shares, with a par value of \$0.0001 per share, of which 1,000,000,000 shares are designated as common stock and 100,000,000 shares are designated as preferred stock.

Common stock

The holders of our common stock are entitled to one vote per share in any election of directors and on all matters submitted to a vote of our stockholders and do not have cumulative voting rights. Accordingly, holders of a majority of the shares of our common stock entitled to vote in any election of directors may elect all of the directors standing for election. Subject to preferences that may be applicable to any preferred stock outstanding at the time, the holders of outstanding shares of common stock are entitled to receive ratably any dividends declared by our board of directors out of assets legally available. Upon our liquidation, dissolution, or winding up, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any then outstanding shares of preferred stock. Holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock.

Preferred stock

Our board of directors is authorized, without further action by our stockholders except as required by the listing standards of the Nasdaq Global Select Market ("Nasdaq"), to issue from time to time up to an aggregate of 100,000,000 shares of preferred stock in one or more series and to designate the rights, preferences, privileges, and restrictions of the preferred stock, including dividend rights, conversion rights, voting rights, redemption rights, liquidation preference, sinking fund terms, and the number of shares constituting any series or the designation of any series, any or all of which may be greater than the rights of common stock.

Anti-takeover effects of the COI, Bylaws and Delaware law

Our COI and Bylaws contain certain provisions that could have the effect of delaying, deferring or discouraging another party from acquiring control of the Company. These provisions and certain provisions of Delaware law, which are summarized below, could discourage takeovers, coercive or otherwise. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors. We believe

that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us.

Undesignated preferred stock. As discussed above, our board of directors has the ability to designate and issue preferred stock with voting or other rights or preferences that could deter hostile takeovers or delay changes in our control or management.

Limits on the ability of stockholders to act by written consent or call a special meeting. Our COI provides that our stockholders may not act by written consent, which may lengthen the amount of time required to take stockholder actions. As a result, the holders of a majority of our capital stock would not be able to amend our COI or Bylaws or remove directors without holding a meeting of stockholders called in accordance with our Bylaws.

In addition, our COI and Bylaws provide that special meetings of the stockholders may be called only by chairman of our board of directors, the chief executive officer, the president (in the absence of a chief executive officer), or our board of directors. A stockholder may not call a special meeting, which may delay the ability of our stockholders to force consideration of a proposal or for holders controlling a majority of our capital stock to take any action, including the removal of directors. Our board of directors may, at any time prior to the holding of a meeting of stockholders and for any reasonable reason, postpone or cancel such meeting.

Requirements for advance notification of stockholder nominations and proposals. Our COI and Bylaws contain advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of our board of directors or a committee of the board of directors. Under our Bylaws, eligible stockholders may nominate persons for our board of directors for inclusion in our proxy statement. To be eligible, a single stockholder, or group of up to 20 stockholders, must own 3% of our outstanding stock continuously from at least three years prior to such nomination through the date of our relevant annual meeting. The individual stockholder, or group of stockholders, may submit that number of director nominations not exceeding the greater of (a) two or (b) 20% of the number of directors in office. Any such nomination must comply with the requirements set forth in our Bylaws. These advance notice procedures may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed and may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempt to obtain control of our company.

Board classification. Our board of directors is divided into three classes. The directors in each class serve for a three-year term, one class being elected each year by our stockholders. This system of electing and removing directors may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Election and removal of directors. Our COI and Bylaws contain provisions that establish specific procedures for appointing and removing members of our board of directors. Under our COI and Bylaws, vacancies and newly created directorships on our board of directors may be filled only by a majority of the directors then serving on the board of directors. Under our COI and Bylaws, directors may be removed only for cause by the affirmative vote of the holders of a majority of the shares then entitled to vote at an election of directors.

No cumulative voting. The Delaware General Corporation Law provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless the certificate of incorporation provides otherwise. Our COI and Bylaws do not expressly provide for cumulative voting. Without cumulative voting, a minority stockholder may not be able to gain as many seats on our board of directors as the stockholder would be able to gain if cumulative voting were permitted. The absence of cumulative voting makes it more difficult for a minority stockholder to gain a seat on our board of directors to influence our board of directors' decision regarding a takeover.

Delaware anti-takeover statute. We are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, our board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by our board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may discourage attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is ComputerShare Trust Company, N.A. The transfer agent's address is 250 Royall Street, Canton, Massachusetts 02021, and its telephone number is (877) 373-6374.

Exchange Listing

Our common stock is listed on Nasdaq under the symbol “PANW.”

PALO ALTO NETWORKS, INC.
2012 EMPLOYEE STOCK PURCHASE PLAN

(as amended and restated May 17, 2022 (the "Restatement Effective Date"))

1. **Purpose.** The purpose of the Plan is to provide employees of the Company and its Designated Companies with an opportunity to purchase Common Stock through accumulated Contributions. The Company intends for the Plan to have two components: a Code Section 423 Component ("423 Component") and a Non-Code Section 423 Component ("Non-423 Component"). The Company's intention is to have the 423 Component of the Plan qualify as an "employee stock purchase plan" under Section 423 of the Code. The provisions of the 423 Component, accordingly, will be construed so as to extend and limit Plan participation in a uniform and nondiscriminatory basis consistent with the requirements of Section 423 of the Code. In addition, this Plan authorizes the grant of an option to purchase shares of Common Stock under the Non-423 Component that does not qualify as an "employee stock purchase plan" under Section 423 of the Code; such an option will be granted pursuant to rules, procedures or subplans adopted by the Administrator designed to achieve tax, securities laws or other objectives for Eligible Employees and the Company. Except as otherwise provided herein, the Non-423 Component will operate and be administered in the same manner as the 423 Component.

2. **Definitions.**

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

(b) "**Affiliate**" means any entity, other than a Subsidiary, in which the Company has an equity or other ownership interest.

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

(d) "**Board**" means the Board of Directors of the Company.

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

(i) A change in the ownership of the Company which occurs on the date that any one person, or more than one person acting as a group ("**Person**"), acquires ownership of the stock of the Company that, together with the stock held by such Person, constitutes more than fifty percent (50%) of the total voting power of the stock of the Company; provided, however, that for purposes of this subsection, the acquisition of additional stock by any one Person, who is considered to own more than fifty percent (50%) of the total voting power of the stock of the Company will not be considered a Change in Control; or

(ii) A change in the effective control of the Company which occurs on the date that a majority of members of the Board is replaced during any twelve (12)-

month period by Directors whose appointment or election is not endorsed by a majority of the members of the Board prior to the date of the appointment or election. For purposes of this clause (ii), if any Person is considered to be in effective control of the Company, the acquisition of additional control of the Company by the same Person will not be considered a Change in Control; or

(iii) A change in the ownership of a substantial portion of the Company's assets which occurs on the date that any Person acquires (or has acquired during the twelve (12)-month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than fifty percent (50%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions; provided, however, that for purposes of this subsection, the following will not constitute a change in the ownership of a substantial portion of the Company's assets: (A) a transfer to an entity that is controlled by the Company's stockholders immediately after the transfer, or (B) a transfer of assets by the Company to: (1) a stockholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company's stock, (2) an entity, fifty percent (50%) or more of the total value or voting power of which is owned, directly or indirectly, by the Company, (3) a Person, that owns, directly or indirectly, fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company, or (4) an entity, at least fifty percent (50%) of the total value or voting power of which is owned, directly or indirectly, by a Person described in this subsection (iii)(B)(3). For purposes of this subsection, gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets.

For purposes of this definition, persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of stock, or similar business transaction with the Company.

Notwithstanding the foregoing, a transaction will not be deemed a Change in Control unless the transaction qualifies as a change in control event within the meaning of Code Section 409A, as it has been and may be amended from time to time, and any proposed or final U.S. Treasury Regulations and Internal Revenue Service guidance that has been promulgated or may be promulgated thereunder from time to time.

Further and for the avoidance of doubt, a transaction will not constitute a Change in Control if: (i) its sole purpose is to change the state of the Company's incorporation, or (ii) its sole purpose is to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction.

(f) "Code" means the U.S. Internal Revenue Code of 1986, as amended. Reference to a specific section of the Code or U.S. Treasury Regulation thereunder will include such section or regulation, any valid regulation or other official applicable guidance promulgated under such section, and any comparable provision of any future legislation or regulation amending, supplementing or superseding such section or regulation.

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

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

(i) **“Company”** means Palo Alto Networks, Inc., a Delaware corporation, or any successor thereto.

(j) **“Compensation”** means an Eligible Employee’s base straight time gross earnings, payments for overtime and shift premium, but exclusive of payments for commissions, incentive compensation, bonuses and other similar compensation. The Administrator, in its discretion, may, on a uniform and nondiscriminatory basis, establish a different definition of Compensation for a subsequent Offering Period.

(k) **“Contributions”** means the payroll deductions and other additional payments that the Company may permit to be made by a Participant to fund the exercise of options granted pursuant to the Plan.

(l) **“Designated Company”** means any Subsidiary or Affiliate that has been designated by the Administrator from time to time in its sole discretion as eligible to participate in the Plan. For purposes of the 423 Component, only the Company and its Subsidiaries may be Designated Companies, provided, however, that at any given time, a Subsidiary that is a Designated Company under the 423 Component shall not be a Designated Company under the Non-423 Component.

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

(n) **“Eligible Employee”** means any individual who is providing services to the Company or a Designated Company as an employee and is considered by the Company or a Designated Company to be an employee and who meets any minimum service limitations determined under the methodology specified below. For purposes of clarity, the term “Eligible Employee” shall not include the following, regardless of any subsequent reclassification as an employee by the Company or a Designated Company, any governmental agency, or any court: (i) any independent contractor; (ii) any consultant; (iii) any individual performing services for the Company or a Designated Company who has entered into an independent contractor or consultant agreement with the Company or a Designated Company; (iv) any individual performing services for the Company or a Designated Company under a purchase order, a supplier agreement or any other agreement that the Company or a Designated Company enters into for services; (v) any individual classified by the Company or a Designated Company as contract labor (such as contractors, contract employees, job shoppers), regardless of length of service; (vi) any individual whose base wage or salary is not processed for payment by the payroll department(s) or payroll provider(s) of the Company or a Designated Company; and (vii) any leased employee within the meaning of Code Section 414(n), including such persons leased from a professional employer organization. The exclusive means for individuals who are not contemporaneously classified as employees of the Company or a Designated Company on the Company’s or Designated Company’s payroll system on an Enrollment Date to become eligible to participate in the Plan is through the adoption of a subplan that specifically designates such individuals eligible to participate.

For purposes of the Plan, the employment relationship will be treated as continuing intact while the individual is on sick leave or other leave of absence that the Employer approves or is legally protected under Applicable Laws. Where the period of leave exceeds three (3) months and the individual’s right to reemployment is not guaranteed either by statute or by contract, the employment relationship will be deemed to have terminated three (3) months and one (1) day following the commencement of such leave.

The Administrator retains the authority to revise the definition of Eligible Employee (on a uniform and nondiscriminatory basis or as otherwise permitted by Treasury Regulation Section 1.423-2). Accordingly, the Administrator, in its discretion, from time to time may, prior to an Enrollment Date for all options to be granted on such Enrollment Date in an Offering, determine (on a uniform and nondiscriminatory basis or as otherwise permitted by Treasury Regulation Section 1.423-2) that the definition of Eligible Employee will or will not include an individual if he or she: (i) has not completed at least two (2) years of service since his or her last hire date (or such lesser period of time as may be determined by the Administrator in its discretion), (ii) customarily works not more than twenty (20) hours per week (or such lesser period of time as may be determined by the Administrator in its discretion), (iii) customarily works not more than five (5) months per calendar year (or such lesser period of time as may be determined by the Administrator in its discretion), (iv) is a highly compensated employee within the meaning of Section 414(q) of the Code, or (v) is a highly compensated employee within the meaning of Section 414(q) of the Code with compensation above a certain level or is an officer or subject to the disclosure requirements of Section 16(a) of the Exchange Act, provided the exclusion is applied with respect to each Offering in an identical manner to all highly compensated individuals of the Employer whose Employees are participating in that Offering. Until subsequent action is taken by the Administrator, to be an Eligible Employee an individual must be customarily employed for at least twenty (20) hours per week and more than five (5) months in any calendar year by the Employer, or any lesser number of hours per week and/or number of months in any calendar year established by the Administrator (if required under applicable local law) for purposes of any separate Offering or for Eligible Employees participating in the Non-423 Component. Each exclusion shall be applied with respect to an Offering in a manner complying with U.S. Treasury Regulation Section 1.423-2(e)(2)(ii)."

(o) "**Employer**" means the employer of the applicable Eligible Employee(s).

(p) "**Enrollment Date**" means the first Trading Day of each Offering Period.

(q) "**Exchange Act**" means the U.S. Securities Exchange Act of 1934, as amended, including the rules and regulations promulgated thereunder.

(r) "**Exercise Date**" means the first Trading Day on or after February 28 and August 31 of each Purchase Period. Notwithstanding the foregoing, the first Exercise Date following the Restatement Effective Date will be February 28, 2018.

(s) "**Fair Market Value**" means, as of any date and unless the Administrator determines otherwise, the value of Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or a national market system, including without limitation the New York Stock Exchange, NASDAQ Global Select Market, the NASDAQ Global Market or the NASDAQ Capital Market of The NASDAQ Stock Market, its Fair Market Value will be the closing sales price for such stock as quoted on such exchange or system on the date of determination (or the closing bid, if no sales were reported), as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(ii) If the Common Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, its Fair Market Value will be the mean between the high bid and low asked prices for the Common Stock on the date of

determination (or if no bids and asks were reported on that date, as applicable, on the last Trading Day such bids and asks were reported), as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or

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

(t) "Fiscal Year" means the fiscal year of the Company.

(u) "New Exercise Date" means a new Exercise Date if the Administrator shortens any Offering Period then in progress.

(v) "Offering" means an offer under the Plan of an option that may be exercised during an Offering Period as further described in Section 4. For purposes of the Plan, the Administrator may designate separate Offerings under the Plan (the terms of which need not be identical) in which Employees of one or more Employers will participate, even if the dates of the applicable Offering Periods of each such Offering are identical and the provisions of the Plan will separately apply to each Offering. To the extent permitted by U.S. Treasury Regulation Section 1.423-2(a)(1), the terms of each Offering need not be identical provided that the terms of the Plan and an Offering together satisfy U.S. Treasury Regulation Section 1.423-2(a)(2) and (a)(3).

(w) "Offering Periods" means the periods of approximately twenty-four (24) months during which an option granted pursuant to the Plan may be exercised, (i) commencing on the first Trading Day on or after February 28 and August 31 of each year and terminating on the first Trading Day on or after August 31 and February 28, approximately twenty-four (24) months later (subject to Section 30); for clarity, the first Offering Period following the Restatement Effective Date will commence on September 18, 2017 and end on the first Trading Date on or after August 31, 2019. The duration and timing of Offering Periods may be changed pursuant to Sections 4 and 20.

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

(y) "Participant" means an Eligible Employee who participates in the Plan.

(z) "Plan" means this Palo Alto Networks, Inc. 2012 Employee Stock Purchase Plan.

(aa) "Purchase Period" means the period during an Offering Period which shares of Common Stock may be purchased on a Participant's behalf in accordance with the terms of the Plan. Unless the Administrator provides otherwise, for Offering Periods commencing on or after the Restatement Effective Date, the Purchase Period shall mean the approximately six (6)-month period commencing on one Exercise Date and ending with the next Exercise Date, except that the first Purchase Period of any Offering Period shall commence on the Enrollment Date and end with the next Exercise Date.

(bb) "Purchase Price" means an amount equal to eighty-five percent (85%) of the Fair Market Value of a share of Common Stock on the Enrollment Date or on the Exercise Date, whichever is lower; provided however, that the Purchase Price may be determined for subsequent Offering Periods by the Administrator subject to compliance with Section 423 of the Code (or any successor rule or provision or any other Applicable Law, regulation or stock exchange rule) or pursuant to Section 20.

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

(dd) **“Trading Day”** means a day on which the national stock exchange upon which the Common Stock is listed is open for trading.

(ee) **“U.S. Treasury Regulations”** means the Treasury regulations of the Code. Reference to a specific Treasury Regulation or Section of the Code shall include such Treasury Regulation or Section, any valid regulation promulgated under such Section, and any comparable provision of any future legislation or regulation amending, supplementing or superseding such Section or regulation.

3. **Eligibility.**

(a) **Enrollment.** Any Eligible Employee on a given Enrollment Date subsequent to the first Offering Period will be eligible to participate in the Plan, subject to the requirements of Section 5.

(b) **Non-U.S. Employees.** Eligible Employees who are citizens or residents of a non-U.S. jurisdiction (without regard to whether they also are citizens or residents of the United States or resident aliens (within the meaning of Section 7701(b)(1)(A) of the Code)) may be excluded from participation in the Plan or an Offering if the participation of such Eligible Employees is prohibited under the laws of the applicable jurisdiction or if complying with the laws of the applicable jurisdiction would cause the Plan or an Offering to violate Section 423 of the Code. In the case of the Non-423 Component, Eligible Employees may be excluded from participation in the Plan or an Offering if the Administrator has determined that participation of such Eligible Employees is not advisable or practicable.

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

4. **Offering Periods.** The Plan will be implemented by overlapping Offering Periods with a new Offering Period commencing on the first Trading Day on or after February 28 and August 31 of each year, or on such other date as the Administrator will determine. Notwithstanding the foregoing, the first Offering Period following the Restatement Effective Date will commence on September 18, 2017. The Administrator will have the power to change the duration of Offering Periods (including the commencement dates thereof) with respect to future Offerings without stockholder approval if such change is announced prior to the scheduled beginning of the first Offering Period to be affected thereafter; provided, however, that no Offering Period may last more than twenty-seven (27) months.

5. Participation. An Eligible Employee may participate in the Plan pursuant to Section 3(a) by (i) submitting to the Company's stock administration office (or its designee), on or before a date determined by the Administrator prior to an applicable Enrollment Date, a properly completed subscription agreement authorizing Contributions in the form provided by the Administrator for such purpose, or (ii) following an electronic or other enrollment procedure determined by the Administrator.

6. Contributions.

(a) At the time a Participant enrolls in the Plan pursuant to Section 5, he or she will elect to have Contributions (in the form of payroll deductions or otherwise, to the extent permitted by the Administrator) made on each pay day during the Offering Period in an amount not exceeding fifteen percent (15%) of the Compensation, which he or she receives on each pay day during the Offering Period, including any pay day that occurs on an Exercise Date. The Administrator, in its sole discretion, may permit all Participants in a specified Offering to contribute amounts to the Plan through payment by cash, check or other means set forth in the subscription agreement prior to each Exercise Date of each Purchase Period. A Participant's subscription agreement will remain in effect for successive Offering Periods unless terminated as provided in Section 10 hereof.

(b) In the event Contributions are made in the form of payroll deductions, such payroll deductions for a Participant will commence on the first pay day following the Enrollment Date and will end on the last pay day on or prior to the Exercise Date of such Offering Period to which such authorization is applicable, unless sooner terminated by the Participant as provided in Section 10 hereof; provided, however, that for the first Offering Period, payroll deductions will commence on the first pay day on or following the end of the Enrollment Window.

(c) All Contributions made for a Participant will be credited to his or her account under the Plan and Contributions will be made in whole percentages only. A Participant may not make any additional payments into such account.

(d) A Participant may discontinue his or her participation in the Plan as provided in Section 10. Unless otherwise determined by the Administrator, during an Offering Period, a Participant may not increase the rate of his or her Contributions and may only decrease the rate of his or her Contributions one (1) time per Purchase Period. Any such decrease during an Offering Period requires the Participant (i) properly completing and submitting to the Company's stock administration office (or its designee), on or before a date determined by the Administrator prior to an applicable Exercise Date, a new subscription agreement authorizing the change in Contribution rate in the form provided by the Administrator for such purpose, or (ii) following an electronic or other procedure prescribed by the Administrator. If a Participant has not followed such procedures to change the rate of Contributions, the rate of his or her Contributions will continue at the originally elected rate throughout the Offering Period and future Offering Periods (unless terminated as provided in Section 10). The Administrator may, in its sole discretion, amend the nature and/or number of Contribution rate changes that may be made by Participants during any Offering Period or Purchase Period, and may establish such other conditions or limitations as it deems appropriate for Plan administration. Any change in payroll deduction rate made pursuant to this Section 6(d) will be effective as of the first full payroll period following five (5) business days after the date on which the change is made by the Participant (unless the Administrator, in its sole discretion, elects to process a given change in payroll deduction rate more quickly).

(e) Notwithstanding the foregoing, to the extent necessary to comply with Section 423(b)(8) of the Code and Section 3(c), a Participant's Contributions may be decreased to zero percent (0%) at any time during a Purchase Period. Subject to Section 423(b)(8) of the Code and Section 3(c) hereof, Contributions will recommence at the rate originally elected by the Participant effective as of the beginning of the first Purchase Period scheduled to end in the following calendar year, unless terminated by the Participant as provided in Section 10.

(f) Notwithstanding any provisions to the contrary in the Plan, the Administrator may allow Eligible Employees to participate in the Plan via cash contributions instead of payroll deductions if (i) payroll deductions are not permitted under applicable local law, (ii) the Administrator determines that cash contributions are permissible under Section 423 of the Code, or (iii) for Participants participating in the Non-423 Component.

(g) At the time the option is exercised, in whole or in part, or at the time some or all of the Common Stock issued under the Plan is disposed of (or any other time that a taxable event related to the Plan occurs), the Participant must make adequate provision for the Company's or Employer's federal, state, local or any other tax liability payable to any authority including taxes imposed by jurisdictions outside of the U.S., national insurance, social security or other tax withholding obligations, if any, which arise upon the exercise of the option or the disposition of the Common Stock (or any other time that a taxable event related to the Plan occurs). At any time, the Company or the Employer may, but will not be obligated to, withhold from the Participant's compensation the amount necessary for the Company or the Employer to meet applicable withholding obligations, including any withholding required to make available to the Company or the Employer any tax deductions or benefits attributable to sale or early disposition of Common Stock by the Eligible Employee. In addition, the Company or the Employer may, but will not be obligated to, withhold from the proceeds of the sale of Common Stock or any other method of withholding the Company or the Employer deems appropriate to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f).

7. Grant of Option. On the Enrollment Date of each Offering Period, each Eligible Employee participating in such Offering Period will be granted an option to purchase on each Exercise Date during such Offering Period (at the applicable Purchase Price) up to a number of shares of Common Stock determined by dividing such Eligible Employee's Contributions accumulated prior to such Exercise Date and retained in the Eligible Employee's account as of the Exercise Date by the applicable Purchase Price; provided that in no event will an Eligible Employee be permitted to purchase during each Purchase Period more than 625 shares of Common Stock (subject to any adjustment pursuant to Section 19) and provided further that such purchase will be subject to the limitations set forth in Sections 3(d) and 13. The Eligible Employee may accept the grant of such option (i) with respect to the first Offering Period by submitting a properly completed subscription agreement in accordance with the requirements of Section 5 on or before the last day of the Enrollment Window, and (ii) with respect to any subsequent Offering Period under the Plan, by electing to participate in the Plan in accordance with the requirements of Section 5. The Administrator may, for future Offering Periods, increase or decrease, in its absolute discretion, the maximum number of shares of Common Stock that an Eligible Employee may purchase during each Purchase Period of an Offering Period. Exercise of the option will occur as provided in Section 8, unless the Participant has withdrawn pursuant to Section 10. The option will expire on the last day of the Offering Period.

8. Exercise of Option.

(a) Unless a Participant withdraws from the Plan as provided in Section 10, his or her option for the purchase of shares of Common Stock will be exercised automatically on the Exercise Date, and the maximum number of full shares subject to the option will be purchased for such Participant at the applicable Purchase Price with the accumulated Contributions from his or her account. No fractional shares of Common Stock will be purchased; any Contributions accumulated in a Participant's account, which are not sufficient to purchase a full share will be promptly refunded to Participant as soon as reasonably practicable following an Exercise Date. During a Participant's lifetime, a Participant's option to purchase shares hereunder is exercisable only by him or her.

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

9. **Delivery.** As soon as reasonably practicable after each Exercise Date on which a purchase of shares of Common Stock occurs, the Company will arrange the delivery to each Participant of the shares purchased upon exercise of his or her option in a form determined by the Administrator (in its sole discretion) and pursuant to rules established by the Administrator. The Company may permit or require that shares be deposited directly with a broker designated by the Company or to a designated agent of the Company, and the Company may utilize electronic or automated methods of share transfer. The Company may require that shares be retained with such broker or agent for a designated period of time and/or may establish other procedures to permit tracking of disqualifying dispositions of such shares. No Participant will have any voting, dividend, or other stockholder rights with respect to shares of Common Stock subject to any option granted under the Plan until such shares have been purchased and delivered to the Participant as provided in this Section 9.

10. Withdrawal.

(a) A Participant may withdraw all but not less than all the Contributions credited to his or her account and not yet used to exercise his or her option under the Plan at least one (1) business day prior to an Exercise Date by (i) submitting to the Company's stock administration office (or its designee) a written notice of withdrawal in the form determined by the Administrator for such purpose, or (ii) following an electronic or other withdrawal procedure determined by the Administrator. All of the Participant's

Contributions credited to his or her account will be paid to such Participant promptly after receipt of notice of withdrawal and such Participant's option for the Offering Period will be automatically terminated, and no further Contributions for the purchase of shares will be made for such Offering Period. If a Participant withdraws from an Offering Period, Contributions will not resume at the beginning of the succeeding Offering Period, unless the Participant re-enrolls in the Plan in accordance with the provisions of Section 5.

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

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

12. **Interest.** No interest will accrue on the Contributions of a participant in the Plan, except as may be required by Applicable Law, as determined by the Company, and if so required by the laws of a particular jurisdiction, shall apply to all Participants in the relevant Offering under the 423 Component, except to the extent otherwise permitted by U.S. Treasury Regulation Section 1.423-2(f).

13. **Stock.**

(a) Subject to adjustment upon changes in capitalization of the Company as provided in Section 19 hereof, the maximum number of shares of Common Stock that will be made available for sale under the Plan will be 1,000,000 shares of Common Stock, plus an annual increase to be added on the first day of each Fiscal Year beginning with the 2014 Fiscal Year equal to the least of (i) 2,000,000 shares of Common Stock, (ii) one percent (1%) of the outstanding shares of Common Stock on such date, or (iii) an amount determined by the Administrator.

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

(c) Shares of Common Stock to be delivered to a Participant under the Plan will be registered in the name of the Participant or in the name of the Participant and his or her spouse.

14. **Administration.** The Plan will be administered by the Board or a Committee appointed by the Board, which Committee will be constituted to comply with Applicable Laws. The Administrator will have full and exclusive discretionary authority to construe, interpret and apply the terms of the Plan, to designate separate Offerings under the Plan, to designate Subsidiaries and Affiliates as participating in the 423 Component or Non-423 Component, to determine eligibility, to adjudicate all disputed claims filed under the Plan and to establish such procedures that it deems necessary for the administration of the Plan (including, without limitation, to adopt such procedures and sub-plans as are necessary or

appropriate to permit the participation in the Plan by employees who are foreign nationals or employed outside the U.S., the terms of which sub-plans may take precedence over other provisions of this Plan, with the exception of Section 13(a) hereof, but unless otherwise superseded by the terms of such sub-plan, the provisions of this Plan shall govern the operation of such sub-plan). Unless otherwise determined by the Administrator, the Employees eligible to participate in each sub-plan will participate in a separate Offering or in the Non-423 Component. Without limiting the generality of the foregoing, the Administrator is specifically authorized to adopt rules and procedures regarding eligibility to participate, the definition of Compensation, handling of Contributions, making of Contributions to the Plan (including, without limitation, in forms other than payroll deductions), establishment of bank or trust accounts to hold Contributions, payment of interest, conversion of local currency, obligations to pay payroll tax, determination of beneficiary designation requirements, withholding procedures and handling of stock certificates that vary with applicable local requirements. The Administrator also is authorized to determine that, to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f), the terms of an option granted under the Plan or an Offering to citizens or residents of a non-U.S. jurisdiction will be less favorable than the terms of options granted under the Plan or the same Offering to employees resident solely in the U.S. Every finding, decision and determination made by the Administrator will, to the full extent permitted by law, be final and binding upon all parties.

15. Designation of Beneficiary.

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

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

(c) All beneficiary designations will be in such form and manner as the Administrator may designate from time to time. Notwithstanding Sections 15(a) and (b) above, the Company and/or the Administrator may decide not to permit such designations by Participants in non-U.S. jurisdictions to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f).

16. Transferability. Neither Contributions credited to a Participant's account nor any rights with regard to the exercise of an option or to receive shares of Common Stock under the Plan may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will, the laws of descent and distribution or as provided in Section 15

hereof) by the Participant. Any such attempt at assignment, transfer, pledge or other disposition will be without effect, except that the Company may treat such act as an election to withdraw funds from an Offering Period in accordance with Section 10 hereof.

17. **Use of Funds.** The Company may use all Contributions received or held by it under the Plan for any corporate purpose, and the Company will not be obligated to segregate such Contributions except under Offerings or for Participants in the Non-423 Component for which Applicable Laws require that Contributions to the Plan by Participants be segregated from the Company's general corporate funds and/or deposited with an independent third party. Until shares of Common Stock are issued, Participants will only have the rights of an unsecured creditor with respect to such shares.

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

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

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

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

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

20. Amendment or Termination.

(a) The Administrator, in its sole discretion, may amend, suspend, or terminate the Plan, or any part thereof, at any time and for any reason. If the Plan is terminated, the Administrator, in its discretion, may elect to terminate all outstanding Offering Periods either immediately or upon completion of the purchase of shares of Common Stock on the next Exercise Date (which may be sooner than originally scheduled, if determined by the Administrator in its discretion), or may elect to permit Offering Periods to expire in accordance with their terms (and subject to any adjustment pursuant to Section 19). If the Offering Periods are terminated prior to expiration, all amounts then credited to Participants' accounts that have not been used to purchase shares of Common Stock will be returned to the Participants (without interest thereon, except as otherwise required under Applicable Laws, as further set forth in Section 12 hereof) as soon as administratively practicable.

(b) Without stockholder consent and without limiting Section 20(a), the Administrator will be entitled to change the Offering Periods or Purchase Periods, designate separate Offerings, limit the frequency and/or number of changes in the amount withheld during an Offering Period, establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars, permit Contributions in excess of the amount designated by a Participant in order to adjust for delays or mistakes in the Company's processing of properly completed Contribution elections, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Common Stock for each Participant properly correspond with Contribution amounts, and establish such other limitations or procedures as the Administrator determines in its sole discretion advisable that are consistent with the Plan.

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

(i) amending the Plan to conform with the safe harbor definition under the Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto), including with respect to an Offering Period underway at the time;

(ii) altering the Purchase Price for any Offering Period or Purchase Period including an Offering Period or Purchase Period underway at the time of the change in Purchase Price;

(iii) shortening any Offering Period or Purchase Period by setting a New Exercise Date, including an Offering Period or Purchase Period underway at the time of the Administrator action;

(iv) reducing the maximum percentage of Compensation a Participant may elect to set aside as Contributions; and

(v) reducing the maximum number of Shares a Participant may purchase during any Offering Period or Purchase Period.

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

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

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

As a condition to the exercise of an option, the Company may require the person exercising such option to represent and warrant at the time of any such exercise that the shares are being purchased only for investment and without any present intention to sell or distribute such shares if, in the opinion of counsel for the Company, such a representation is required by any of the aforementioned applicable provisions of law.

23. **Code Section 409A.** The 423 Component of the Plan is exempt from the application of Code Section 409A and any ambiguities herein will be interpreted to so be exempt from Code Section 409A. In furtherance of the foregoing and notwithstanding any provision in the Plan to the contrary, if the Administrator determines that an option granted under the Plan may be subject to Code Section 409A or that any provision in the Plan would cause an option under the Plan to be subject to Code Section 409A, the Administrator may amend the terms of the Plan and/or of an outstanding option granted under the Plan, or take such other action the Administrator determines is necessary or appropriate, in each case, without the Participant's consent, to exempt any outstanding option or future option that may be granted under the Plan from or to allow any such options to comply with Code Section 409A, but only to the extent any such amendments or action by the Administrator would not violate Code Section 409A. Notwithstanding the foregoing, the Company shall have no liability to a Participant or any other party if the option to purchase Common Stock under the Plan that is intended to be exempt from or compliant with Code Section 409A is not so exempt or compliant or for any action taken by the Administrator with respect thereto. The Company makes no representation that the option to purchase Common Stock under the Plan is compliant with Code Section 409A.

24. **Term of Plan.** The Plan will become effective upon the earlier to occur of its adoption by the Board or its approval by the stockholders of the Company. It will continue in effect for a term of twenty (20) years, unless sooner terminated under Section 20.

25. **Stockholder Approval.** The Plan will be subject to approval by the stockholders of the Company within twelve (12) months after the date the Plan is adopted by the Board. Such stockholder approval will be obtained in the manner and to the degree required under Applicable Laws.

26. **Governing Law.** The Plan shall be governed by, and construed in accordance with, the laws of the State of California (except its choice-of-law provisions).

27. No Right to Employment. Participation in the Plan by a Participant shall not be construed as giving a Participant the right to be retained as an employee of the Company or a Subsidiary or Affiliate, as applicable. Furthermore, the Company or a Subsidiary or Affiliate may dismiss a Participant from employment at any time, free from any liability or any claim under the Plan.

28. Severability. If any provision of the Plan is or becomes or is deemed to be invalid, illegal, or unenforceable for any reason in any jurisdiction or as to any Participant, such invalidity, illegality or unenforceability shall not affect the remaining parts of the Plan, and the Plan shall be construed and enforced as to such jurisdiction or Participant as if the invalid, illegal or unenforceable provision had not been included.

29. Compliance with Applicable Laws. The terms of this Plan are intended to comply with all Applicable Laws and will be construed accordingly.

30. Automatic Transfer to Low Price Offering Period. To the extent permitted by Applicable Laws, if the Fair Market Value of the Common Stock on any Exercise Date in an Offering Period is lower than the Fair Market Value of the Common Stock on the Enrollment Date of such Offering Period, then all participants in such Offering Period will be automatically withdrawn from such Offering Period immediately after the exercise of their option on such Exercise Date and automatically re-enrolled in the immediately following Offering Period as of the first day thereof.

PALO ALTO NETWORKS, INC
APPENDIX – ISRAELI TAXPAYERS
2012 EMPLOYEE STOCK PURCHASE PLAN

ADOPTED
ON MAY 30, 2014

PALO ALTO NETWORKS, INC.

APPENDIX - ISRAELI TAXPAYERS

2012 EMPLOYEE STOCK PURCHASE PLAN

1. Special Provisions for Persons who are Israeli Taxpayers

1.1 This Appendix (the "Appendix") to the Palo Alto Networks, Inc. 2012 Employee Stock Purchase Plan (the "ESPP Plan"), is effective as of May 30, 2014 (the "Effective Date").

1.2 The provisions specified hereunder apply only to Eligible Employees who are subject to taxation by the State of Israel with respect to grant of rights to purchase Plan Shares under the ESPP Plan (respectively, the "Israeli Eligible Employee" and "Purchase Rights").

1.3 This Appendix applies with respect to Purchase Rights granted under the ESPP Plan. The purpose of this Appendix is to establish certain rules and limitations applicable to Purchase Rights that may be granted under the ESPP Plan from time to time, in compliance with the securities and other applicable laws currently in force in the State of Israel. For Israeli tax purposes, such Purchase Rights are classified as options issued under the ESPP Plan. Except as otherwise provided by this Appendix, all grants made pursuant to this Appendix shall be governed by the terms of the ESPP Plan. This Appendix is applicable only to grants made after the Effective Date. This Appendix complies with, and is subject to the ITO, the ITO Rules and Section 102 (as such terms are defined below).

1.4 The ESPP Plan and this Appendix shall be read together. In any case of contradiction, whether explicit or implied, between the provisions of this Appendix and the ESPP Plan, the provisions of the ESPP Plan shall govern.

2. Definitions

Capitalized terms not otherwise defined herein shall have the meaning assigned to them in the ESPP Plan. The following additional definitions will apply to grants made pursuant to this Appendix:

"Affiliate" as used in this Appendix, shall mean any Parent or Subsidiary that is an "employing company" within the meaning of Section 102(a) of the ITO.

"Controlling Shareholder" as defined under Section 32(9) of the ITO, means an individual who prior to the grant or as a result of the exercise of any options under the ESPP Plan, holds or would hold, directly or indirectly, in his name or with a relative (as defined in the ITO) (i) 10% of the outstanding shares of the Company, (ii) 10% of the voting power of the Company, (iii) the right to hold or purchase 10% of the outstanding equity or voting power of the Company, (iv) the right to obtain 10% of the "profit" of the Company (as defined in the ITO), or (v) the right to appoint a Director.

"Eligible 102 Israeli Eligible Employee" an Israeli Eligible Employee who is an employee or is serving as a director of the Company or an Affiliate, who is not a Controlling Shareholder.

"ITA" means the Israeli Tax Authority.

"ITO" means the Israeli Income Tax Ordinance (New Version) 1961 and the rules, regulations, orders or procedures promulgated thereunder and any amendments thereto, including specifically the ITO Rules, all as may be amended from time to time.

"ITO Rules" means the Income Tax Rules (Tax Benefits in Share Issuance to Employees) 5763-2003.

"Non-Trustee Grant" means a Purchase Right granted to an Israeli Eligible Employee pursuant to Section 102(c) of the ITO and not held in trust by a Trustee.

"Section 102" means the provisions of Section 102 of the ITO, as amended from time to time.

"Section 3(i)" means Section 3(i) of the ITO, as amended from time to time.

"Shares" means Plan Shares issued upon the exercise of Purchase Rights under the ESPP Plan.

3. Non-Trustee Grant of Purchase Right

3.1 A grant of Purchase Rights to an Israeli Eligible Employee shall be made pursuant to Section 102(c) or Section 3(i) of the ITO.

3.2 Only Eligible 102 Israeli Eligible Employee may receive Non-Trustee Grants under this Appendix.

4. Terms And Conditions Of Non-Trustee Grants

4.1 Each grant under the ESPP Plan shall be subject to the relevant provisions of the ITO, the ITO Rules, Section 102 and any ruling obtained from the ITA in connection with the ESPP Plan, which shall be deemed an integral part of the such grant and shall prevail over any term contained in the ESPP Plan, this Appendix or any offering document that is not consistent therewith. Any provision of the ITO and any approvals by the ITA not expressly specified in this Appendix or any document evidencing a grant that are necessary to receive under the ITO, the ITO Rules and Section 102 in connection with grant under the ESPP Plan shall be binding on the Israeli Eligible Employee. The Israeli Eligible Employee granted a Purchase Offering under the ESPP Plan shall comply with the ITO provisions. For avoidance of doubt, it is reiterated that compliance with the ITO specifically includes compliance with the ITO Rules. Further, the Israeli Eligible Employee agrees to execute any and all documents which the Company and/or Affiliate may reasonably determine to be necessary in order to comply with the provision of any applicable law.

4.2 Shares issued upon an exercise of a Purchase Right shall be transferred to the Israeli Eligible Employee directly, provided that the Israeli Eligible

Employee first complies with all applicable provisions of the ESPP Plan, and all taxes which apply to the grant of the Purchase Right and exercise of the Purchase Rights were paid.

5. Tax Consequences

Any tax consequences arising from the grant of the Purchase Right or from exercise of the Purchase Right or from the sale of Shares issued upon an exercise of the Purchase Right, or from any other event or act (of the Company, and/or its Affiliates, or the Israeli Eligible Employee) hereunder, shall be borne solely by the Israeli Eligible Employee. The Company and/or its Affiliates shall withhold taxes according to the requirements under the applicable laws, rules, and regulations, including withholding taxes at source. Furthermore, the Israeli Eligible Employee shall agree to indemnify the Company and/or its Affiliates and hold them harmless against and from any and all liability for any such tax or interest or penalty thereon, including without limitation, liabilities relating to the necessity to withhold, or to have withheld, any such tax from any payment made to the Israeli Eligible Employee. The Company or any of its Affiliates may make such provisions and take such steps as it may deem necessary or appropriate for the withholding of all taxes required by law to be withheld with respect to Purchase Rights granted under the ESPP Plan and the sale of Shares issued upon an exercise of such Purchase Right, including, but not limited, to (i) deducting the amount so required to be withheld from any other amount then or thereafter payable to an Israeli Eligible Employee, and/or (ii) requiring an Israeli Eligible Employee to pay to the Company or any of its Affiliates the amount so required to be withheld as a condition of the issuance, delivery, distribution or release of any Share, and/or (iii) by causing the exercise of Purchase Right and/or the sale of Shares held by an Israeli Eligible Employee to cover such liability, up to the amount required to satisfy minimum statutory withholding requirements. In addition, the Israeli Eligible Employee will be required to pay any amount which exceeds the tax to be withheld and remitted to the tax authorities, pursuant to applicable tax laws, regulations and rules.

6. Guarantee

If an Eligible 102 Israeli Eligible Employee that holds Shares issued upon the exercise of Purchase Rights ceases to be employed by the Company or any Affiliate, such Israeli Eligible Employee shall extend to the Company and/or its Affiliate a security or guarantee for the payment of tax due at the time of sale of Shares to the satisfaction of the Company, all in accordance with the provisions of Section 102 of the ITO and the ITO Rules.

7. Governing Law and Jurisdiction

Notwithstanding any other provision of the ESPP Plan, with respect to Israeli Eligible Employees subject to this Appendix, (i) the ESPP Plan the Purchase Rights and Shares issued thereunder or in connection therewith shall be governed by, and interpreted in accordance with, the laws of the State of Israel applicable to contracts made and to be performed therein, and (ii) any contribution by Israeli Eligible Employees under the ESPP

Plan by means of salary deduction shall be subject to the restrictions and limitations provided under applicable Israeli labor laws.

8. Securities Laws

Without derogation from the any provisions of the ESPP Plan, all Purchase Rights and Shares issued hereunder shall be subject to compliance with the Israeli Securities Law, 1968, and the rules and regulations promulgated thereunder.

EXHIBIT A

PALO ALTO NETWORKS, INC.

2012 EMPLOYEE STOCK PURCHASE PLAN

GLOBAL SUBSCRIPTION AGREEMENT

1. **Enrollment.** By electronically accepting this Global Subscription Agreement and the Appendix to the Global Subscription Agreement (“Appendix”) (together, the “Agreement”), I hereby elect to participate in the Palo Alto Networks, Inc. 2012 Employee Stock Purchase Plan (the “ESPP”) and subscribe to purchase shares of Common Stock in accordance with this Agreement and the ESPP. Any defined terms in this Agreement shall have the meaning ascribed to such terms in the ESPP.
2. **Amount of Contribution.** I hereby authorize payroll deductions from each paycheck at the percentage of my Compensation (from 1% to 15%) as indicated on the online enrollment page (and as I may subsequently change, to the extent allowed under the provisions of the ESPP and the Administrator) on each payday during the Offering Period in accordance with the ESPP. (Please note that no fractional percentages are permitted.) I acknowledge that a lesser percentage of my Compensation than indicated by me may be contributed if necessary to comply with Applicable Laws (in particular, those related to minimum salary requirements).

I understand that the ESPP is a voluntary plan and I acknowledge that any payroll deductions I elect to contribute to the ESPP are made on an entirely voluntary basis. I understand that said payroll deductions will be accumulated for the purchase of shares of Common Stock at the applicable Purchase Price determined in accordance with the ESPP. I also understand that, subject to the provisions of the ESPP, I may freely withdraw from participation in the ESPP (through the Company’s designated electronic process) and receive a full refund of all voluntary contributions I have made under the ESPP that have not been applied toward the purchase of shares of Common Stock. Finally, I understand that if I do not withdraw from an Offering Period, any accumulated payroll deductions will be used to automatically exercise my option and purchase Common Stock under the ESPP.

Unless I withdraw from the ESPP or become ineligible to participate in the ESPP, or unless the ESPP is terminated by the Company, I will continue to participate in the ESPP during subsequent Offering Periods and shares of Common Stock will be purchased on my behalf with my accumulated payroll deductions on the applicable Exercise Date. My participation in the ESPP will continue to be governed by this Agreement and the ESPP. At its discretion and to the extent permitted by the ESPP, the Company may amend the ESPP and/or this Agreement, and by continuing to participate in the ESPP, and without the need to provide affirmative consent, I agree to the terms and conditions of the amended ESPP and/or Agreement.

I agree to execute a separate participation agreement with the Company or the Employer (as defined below), or any other agreement or consent that may be required by the Company or the Employer in connection with this authorization, either now or in the future. I understand that I will not be able to participate in the ESPP if I fail to execute any such consent or agreement.

3. **Issuance of Shares.** Shares of Common Stock purchased for me under the ESPP should be issued in the name(s) of the person(s) I specify on the online enrollment page. (Eligible Employee or Eligible Employee and Spouse only).
4. **Responsibility for Taxes.** I acknowledge that, regardless of any action taken by the Company or, if different, my employer (the "Employer"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefits tax, payment on account or other tax-related items related to my participation in the ESPP and legally applicable or deemed legally applicable to me ("Tax-Related Items") is and remains my responsibility and may exceed the amount, if any, actually withheld by the Company or the Employer. I further acknowledge that the Company and/or the Employer (1) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the ESPP, including, but not limited to, the grant of the option to purchase shares of Common Stock, the purchase of shares of Common Stock, the issuance of shares of Common Stock purchased under the ESPP, the sale of shares of Common Stock purchased under the ESPP or the receipt of any dividends; and (2) do not commit to and are under no obligation to structure the terms of the option to purchase shares of Common Stock or any aspect of the ESPP to reduce or eliminate my liability for Tax-Related Items or achieve any particular tax result. Further, if I am subject to Tax-Related Items in more than one jurisdiction, I acknowledge that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

In connection with any relevant taxable or tax withholding event, as applicable, I agree to make adequate arrangements satisfactory to the Company and/or the Employer to satisfy all Tax-Related Items. In this regard, I authorize the Company and/or the Employer, at their discretion, to satisfy any obligations with regard to all Tax-Related Items by one or a combination of the following: (1) withholding from my wages or other cash compensation payable to me by the Company, the Employer, or any other Subsidiary or Affiliate; (2) withholding from proceeds of the sale of shares of Common Stock under the ESPP, either through a voluntary sale or through a mandatory sale arranged by the Company (on my behalf pursuant to this authorization without further consent); (3) withholding shares of Common Stock to be issued at purchase under the ESPP; or (4) any other method deemed by the Company to comply with Applicable Laws and the ESPP.

The Company and/or the Employer may withhold or account for Tax-Related Items by considering statutory withholding rates or other withholding rates, including maximum rates applicable in my jurisdiction(s). In the event of over-withholding, I may receive a refund of any over-withheld amount in cash (with no entitlement to the equivalent in

shares of Common Stock) or, if not refunded, I may be able to seek a refund from the applicable tax authorities. In the event of under-withholding, I may be required to pay additional Tax-Related Items directly to the applicable tax authorities. If the obligation for Tax-Related Items is satisfied by withholding shares of Common Stock, for tax purposes, I am deemed to have been issued the full number of shares of Common Stock purchased under the ESPP, notwithstanding that a number of the shares of Common Stock is held back solely for the purpose of paying the Tax-Related Items.

Finally, I agree to pay to the Company or the Employer any amount of Tax-Related Items that the Company or the Employer may be required to withhold or account for as a result of my participation in the ESPP that cannot be satisfied by the means previously described. The Company may refuse to purchase or deliver the shares or the proceeds of the sale of shares of Common Stock, if I fail to comply with my obligations in connection with the Tax-Related Items.

5. **Nature of Grant.** By enrolling and participating in the ESPP, I acknowledge, understand and agree that:

- (a) the ESPP is established voluntarily by the Company, it is discretionary in nature, and it may be terminated, suspended or amended by the Company at any time, to the extent permitted by the ESPP;
- (b) the grant of the option to purchase shares of Common Stock is exceptional, voluntary and does not create any contractual or other right to receive future options or benefits in lieu of options, even if options have been granted in the past;
- (c) all decisions with respect to future options to purchase shares of Common Stock or other grants, if any, will be at the sole discretion of the Company;
- (d) the grant of the option to purchase shares of Common Stock and my participation in the ESPP shall not create a right to employment or be interpreted as forming an employment or service contract with the Company and shall not interfere with the ability of the Employer to terminate my employment relationship (if any) at any time;
- (e) I am voluntarily participating in the ESPP;
- (f) the ESPP and the shares of Common Stock purchased under the ESPP, and the income from and value of same, are not intended to replace any pension rights or compensation;
- (g) the ESPP and the shares of Common Stock subject to the ESPP, and the income from and value of same, are not part of normal or expected compensation for purpose of calculating any severance, resignation, termination, redundancy,

dismissal, end-of-service payments, bonuses, long-service awards, leave-related pay, holiday pay, pension or retirement or welfare benefits or similar payments;

- (h) unless otherwise agreed with the Company, the option to purchase shares of Common Stock and the shares of Common Stock subject to the option, and the income from and value of same, are not granted as consideration for, or in connection with, the service I may provide as a director of a Subsidiary or Affiliate;
- (i) the future value of the underlying shares of Common Stock is unknown, indeterminable and cannot be predicted with certainty and the value of the shares of Common Stock purchased under the ESPP may increase or decrease in the future, even below the Purchase Price;
- (j) no claim or entitlement to compensation or damages shall arise from forfeiture of the option to purchase shares of Common Stock under the ESPP resulting from termination of my employment (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where I am employed or the terms of my employment agreement, if any);
- (k) in the event of termination of my employment (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where I am employed or the terms of my employment agreement, if any), my right to participate in the ESPP, if any, will terminate effective as of the date I cease to actively provide services and will not be extended by any notice period (*e.g.*, employment would not include any contractual notice or any period of “garden leave” or similar period mandated under employment laws in the jurisdiction where I am employed or the terms of my employment agreement, if any); the Administrator shall have exclusive discretion to determine when I am no longer actively employed for purposes of my participation in the ESPP (including whether I can be considered to be actively employed while on a leave of absence);
- (l) unless otherwise provided in the ESPP or by the Company in its discretion, the option to purchase shares of Common Stock and the benefits evidenced by this Agreement do not create any entitlement to have the ESPP or any such benefits granted thereunder, transferred to, or assumed by, another company nor to be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the shares of the Company; and
- (m) if I provide services outside the United States:
 - (i) the ESPP and the shares of Common Stock subject to the ESPP, and the income from and value of same, are not part of normal or expected compensation for any purposes; and

- (ii) neither the Company, the Employer nor any Subsidiary or Affiliate shall be liable for any foreign exchange rate fluctuation between my local currency and the United States Dollar that may affect the value of the shares of Common Stock or any amounts due pursuant to the purchase of the shares or the subsequent sale of any shares of Common Stock purchased under the ESPP.

6. **No Advice Regarding Grant.** The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding my participation in the ESPP or my purchase or sale of the shares of Common Stock. I understand and agree that I should consult with my own personal tax, legal and financial advisors regarding my participation in the ESPP before taking any action related to the ESPP.

7. **Governing Law and Venue.** The option to purchase shares of Common Stock and the provisions of this Agreement are governed by, and subject to, the laws of the State of California (except its choice-of-law provisions).

For purposes of any action, lawsuit or other proceedings brought to enforce this Agreement, relating to it, or arising from it, the parties hereby submit to and consent to the sole and exclusive jurisdiction of the courts of Santa Clara County, California, or the federal courts for the United States for the Northern District of California, and no other courts, where this grant is made and/or to be performed.

8. **Language.** I acknowledge that I am sufficiently proficient in English, or have consulted with an advisor who is sufficiently proficient in English, so as to allow me to understand the terms and conditions of this Agreement. Furthermore, if I have received this Agreement or any other document related to the ESPP translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

9. **Electronic Delivery and Participation.** The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the ESPP by electronic means. I hereby consent to receive such documents by electronic delivery and agree to participate in the ESPP through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

10. **Severability.** The provisions of this Agreement are severable and if any one or more provisions are determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

11. **Appendix.** Notwithstanding any provisions in this Agreement, my participation in the ESPP shall be subject to the additional terms and conditions set forth in for my country in the Appendix. Moreover, if I relocate to one of the countries included in the Appendix, the additional terms and conditions for such country will apply to me, to the extent the Company determines that the application of such terms and conditions is necessary or

advisable for legal or administrative reasons. The Appendix constitutes part of this Agreement.

12. **Imposition of Other Requirements.** The Company, at its discretion, may elect to terminate, suspend or modify the terms of the ESPP at any time, to the extent permitted by the ESPP. I agree to be bound by such termination, suspension or modification regardless of whether notice is given to me of such event, subject in any case to my right to timely withdraw from the ESPP in accordance with the ESPP withdrawal procedures then in effect. In addition, the Company reserves the right to impose other requirements on my participation in the ESPP and on any shares of Common Stock purchased under the ESPP, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require me to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.
13. **Waiver.** I acknowledge that a waiver by the Company of breach of any provision of this Agreement shall not operate or be construed as a waiver of any other provision of this Agreement, or of any subsequent breach by me or any other Participant.
14. **Insider-Trading/Market-Abuse Laws.** I acknowledge that I may be subject to insider- trading restrictions and/or market-abuse laws which may affect my ability to accept, acquire, sell or otherwise dispose of shares of Common Stock under the ESPP, rights to shares, or rights linked to the value of shares during such times as I am considered to have “inside information” regarding the Company (as defined by the laws or regulations in my country). Local insider-trading laws and regulations may prohibit the cancellation or amendment of orders I place before possessing inside information. Furthermore, I could be prohibited from (i) disclosing the inside information to any third party (other than on a “need to know” basis) and (ii) “tipping” third parties or causing them otherwise to buy or sell securities. I understand that third parties include fellow employees.

Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider-trading policy. I am responsible for complying with any applicable restrictions, and I should speak to my personal legal advisor for further details regarding any applicable insider-trading and/or market-abuse laws in my country.

Exchange Control, Foreign Asset/Account and/or Tax Reporting. I acknowledge that certain foreign asset and/or account reporting requirements which may affect my ability to acquire or hold shares of Common Stock under the ESPP or cash received from participating in the ESPP (including from any dividends received or sale proceeds arising from the sale of shares of Common Stock) in a brokerage or bank account outside my country. I also may be required to repatriate sale proceeds or other funds received as a result of my participation in the ESPP to my country through a designated bank or broker and/or within a certain time after receipt. In addition, I may be subject to tax payment and/or reporting obligations in connection with any income realized under the ESPP and/or from the sale of shares of Common Stock. I acknowledge that I am responsible for ensuring compliance with any applicable requirements, and that I should consult my personal legal advisor on this matter.

* * *

By clicking "ACCEPT" and electronically enrolling in the ESPP, I hereby agree to be bound by the terms of the ESPP and this Agreement. The effectiveness of this Agreement is dependent upon my eligibility to participate in the ESPP. I have received a copy of the complete ESPP and its accompanying prospectus. I understand that my participation in the ESPP is in all respects subject to the terms of the ESPP. Further, I expressly acknowledge the information provided in the Appendix related to the collection, processing and use of my personal data by the Company and its Subsidiaries or Affiliates and the transfer of personal data to the recipients mentioned in the Appendix.

I UNDERSTAND THAT THIS AGREEMENT WILL REMAIN IN EFFECT THROUGHOUT SUCCESSIVE OFFERING PERIODS UNLESS TERMINATED BY ME.

EXHIBIT B

**APPENDIX TO THE PALO ALTO NETWORKS, INC.
2012 EMPLOYEE STOCK PURCHASE PLAN
GLOBAL SUBSCRIPTION AGREEMENT**

Certain capitalized terms used but not defined in this Appendix have the meanings set forth in the ESPP and/or the Global Subscription Agreement.

Terms and Conditions

This Appendix includes additional terms and conditions that govern my participation in the ESPP, including the option to purchase shares of Common Stock granted under the ESPP, if I reside and/or work in one of the countries listed below.

If I am a citizen or resident (or am considered as such for local law purposes) of a country other than the one in which I am currently residing and/or working or if I transfer employment and/or residency to another country after enrolling in the ESPP, the terms and conditions of participation in the ESPP contained herein may not be applicable to me and the Company shall, in its discretion, determine to what extent the terms and conditions contained herein shall apply to my participation in the ESPP.

Notifications

This Appendix also includes information regarding exchange controls and certain other issues of which I should be aware with respect to participation in the ESPP. The information is based on the securities, exchange control and other laws in effect in the respective countries as of August 2022. Such laws are often complex and change frequently. As a result, the Company strongly recommends that I not rely on the information herein as my only source of information relating to the consequences of my participation in the ESPP because the information may be out of date at the time that I purchase shares of Common Stock under the ESPP or sell the shares of Common Stock acquired under the ESPP.

In addition, the information contained herein is general in nature and may not apply to my particular situation, and the Company is not in a position to assure me of a particular result. Accordingly, I should seek appropriate professional advice as to how the relevant laws in my country may apply to my situation.

Finally, if I am a citizen or resident (or am considered as such for local law purposes) of a country other than the one in which I am currently residing and/or working or if I transfer employment and/or residency to another country after enrolling in the ESPP, the information contained herein may not be applicable to me.

DATA PRIVACY PROVISIONS FOR ALL PARTICIPANTS

Terms and Conditions

The following provisions apply if I reside in European Union / European Economic Area member states, Switzerland or the United Kingdom:

- (i) **Collection and Usage.** Pursuant to applicable data protection laws, I am hereby notified that the Company collects, processes, uses and transfers certain personally-identifiable information about me for the legitimate purpose of granting options to purchase shares of Common Stock under the ESPP and implementing, administering and managing my participation in the ESPP. Specifics of the data processing are described below.*
- (ii) **Controller and Representative.** The Company is the controller responsible for the processing of my personal data in connection with the Plan. The Company's representative is Chief Privacy Officer, privacy@paloaltonetworks.com.*
- (iii) **Personal Data Subject to Processing.** The Company collects, processes and uses the following types of personal data about me: my name, employee ID, home address and telephone number, work and email address, date of birth, social security number or other tax identification number, social insurance, passport number or other international identification number, salary, nationality, job title, hire date, work country, department, cost center, subsidiary, organization level, expense group, termination date, supervisor, employment status, any shares of stock or directorships held in the Company, details of all options to purchase shares of Common Stock or any other entitlement to shares of Common Stock awarded, canceled, settled, purchased, vested, unvested or outstanding in my favor, which the Company receives from me or the Employer ("Data").*
- (iv) **Purposes and Legal Bases of Processing.** The Company processes Data for the purposes of performing its contractual obligations under this Agreement, granting options to purchase shares of Common Stock under the ESPP, implementing, administering and managing my participation in the ESPP and facilitating compliance with applicable tax and securities law. The legal basis for the processing of Data by the Company and the third-party service providers described below is the necessity of the data processing for the Company to perform its contractual obligations under this Agreement and for the Company's legitimate business interests of managing the ESPP and generally administering employee equity awards.*
- (v) **Service Providers.** The Company transfers Data to its designated stock plan service provider (currently, E*TRADE Financial Services, Inc. and certain of its affiliated companies ("E*TRADE")), which is an independent stock plan administrator with operations, relevant to the Company, in the United States and assists the Company with the implementation, administration and management of the ESPP. In the future, the Company may select different service providers and may share Data with such service*

providers. The Company's stock plan administrators will open an account for me to receive and trade shares of Common Stock. I will be asked to agree on separate terms and data processing practices with the service provider, which is a condition of my ability to participate in the ESPP. Data will only be accessible by those individuals requiring access to it for purposes of implementing, administering and operating my participation in the Plan. I understand that I may request a list with the names and addresses of any potential recipients of Data by contacting my local human resources representative, filling out the individual rights request online form at <https://www.paloaltonetworks.com/legal-notices/privacy>, or by sending an email to individualrights@paloaltonetworks.com.

- (vi) **International Transfers.** *The Company and its service providers, including, without limitation, E*TRADE, operate, relevant to the Company, in the United States, which means that it will be necessary for Data to be transferred to, and processed in, the United States. I understand and acknowledge that the United States is not subject to an unlimited adequacy finding by the European Commission and that Data may not have an equivalent level of protection as compared to my country of residence. To provide appropriate safeguards for the protection of Data, Data is transferred to the Company based on data transfer and processing agreements implementing the EU Standard Contractual Clauses. I may request a copy of the safeguards used to protect Data by contacting the Company at: privacy@paloaltonetworks.com. The Company reserves the right to use a different but adequate data transfer legal mechanism.*
- (vii) **Data Retention.** *The Company will use Data only as long as is necessary to implement, administer and manage my participation in the ESPP, or as required to comply with legal or regulatory obligations, including under tax, securities, exchange control, and labor laws. When the Company no longer needs Data, the Company will remove it from its systems according to its retention policies. If the Company keeps data longer, it would be to satisfy legal or regulatory obligations and the Company's legal basis would be relevant laws or regulations.*
- (viii) **Data Subject Rights.** *To the extent provided by law, I have the right to (i) inquire whether and what kind of Data the Company holds about me and how it is processed, and to access or request copies of such Data, (ii) request the correction or supplementation of Data that is inaccurate, incomplete or out-of-date in light of the purposes underlying the processing, or (iii) obtain the erasure of Data no longer necessary for the purposes underlying the processing or processed in non-compliance with applicable legal requirements. In addition, I have, to the extent provided by law, the right to (iv) request the Company to restrict the processing of Data in certain situations where I feel its processing is inappropriate, (v) object, in certain circumstances, to the processing of Data for legitimate interests, and to (vi) request portability of Data that I have actively or passively provided to the Company, where the processing of such Data is based on consent or a contractual agreement with me and is carried out by automated means. In case of concerns, I also have the right to (vii) lodge a complaint with the competent local data protection authority. To receive additional*

information regarding my rights, raise any other questions regarding the practices described in this Agreement or to exercise my rights, I should contact the Company at: privacy@paloaltonetworks.com (for questions) or individualrights@paloaltonetworks.com (to exercise rights).

- (iv) **Contractual Requirement.** My provision of Data and its processing as described above is a contractual requirement and a condition to my ability to participate in the ESPP. I understand that, as a consequence of my refusing to provide Data, the Company may not be able to allow me to participate in the ESPP, grant options to purchase shares of Common Stock to me or administer or maintain such options to purchase shares of Common Stock under the ESPP. However, my participation in the ESPP and my acceptance of this Agreement are purely voluntary. While I will not be able receive options to purchase shares of Common Stock under the ESPP if I decide against participating in the ESPP or providing Data as described above, with the exception of not receiving these benefits, my status as an employee will not be affected in any way. For more information on the consequences of the refusal to provide Data, I may contact the Company at: privacy@paloaltonetworks.com.

The following provisions apply if I reside outside of European Union / European Economic Area member states, Switzerland and the United Kingdom:

I consent to the collection, use and transfer, in electronic or other form, of my personal data as described in this Agreement and any other ESPP participation materials by and among, as applicable, the Employer, the Company and any Subsidiary or Affiliate for the exclusive purpose of implementing, administering and managing my participation in the ESPP.

I understand that the Company and the Employer hold certain personal information about me, including, but not limited to, my name, home address and telephone number, email address, date of birth, social insurance number, passport or other identification number, salary, nationality, job title, any shares of stock or directorships held in the Company, details of all options to purchase shares of Common Stock under the ESPP or any other entitlement to shares of stock awarded, cancelled, exercised, vested, unvested, or outstanding in my favor ("Data"), for the exclusive purpose of implementing, administering and managing the ESPP.

*I understand that Data will be transferred to E*TRADE Financial Services, Inc. and certain of its affiliated companies (collectively, "E*TRADE"), or such other stock plan service provider as may be selected by the Company in the future, which is assisting the Company with the implementation, administration and management of the ESPP. I understand that the recipients of Data may be located in the United States or elsewhere, and that the recipients' country (e.g., the United States) may have different data privacy laws and protections than my country. I understand that, if I resides outside the U.S., I may request a list with the names and addresses of any potential recipients of Data by contacting my local human resources representative, filling out the individual rights request online form at <https://www.paloaltonetworks.com/legal-notices/privacy>, or by sending an email to individualrights@paloaltonetworks.com. I authorize the Company, E*TRADE and any other possible recipients which may assist the Company, (presently or in the future) with*

implementing, administering and managing the ESPP to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing my participation in the ESPP. I understand that Data will be held only as long as is necessary to implement, administer and manage my participation in the ESPP. I understand that, if I reside outside the U.S., I may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing my local human resources representative, filling out the individual rights request online form at <https://www.paloaltonetworks.com/legal-notices/privacy>, or by sending an email to individualrights@paloaltonetworks.com. Further, I understand that I am providing the consents herein on a purely voluntary basis. If I do not consent, or if I later seek to revoke my consent, my employment status or service with the Employer will not be affected; the only consequence of refusing or withdrawing my consent is that the Company would not be able to grant me the option to purchase shares of Common Stock under the ESPP or other equity awards or administer or maintain such awards. Therefore, I understand that refusing or withdrawing my consent may affect my ability to participate in the ESPP. For more information on the consequences of my refusal to consent or withdrawal of consent, I understand that I may contact my local human resources representative or send an email to privacy@paloaltonetworks.com.

AUSTRALIA

Terms and Conditions

Australian Offer Document. The Company is providing me with an offer to participate in the ESPP. This offer sets out information regarding the ESPP to Australian resident employees. This information is provided by the Company to ensure compliance of the ESPP with Australian Securities and Investments Commission (“ASIC”) Class Order 14/1000 and relevant provisions of the Corporations Act 2001.

In addition to the information set out in the Agreement (including this Appendix), I am also being provided with copies of the following documents:

- (a) the ESPP;
- (b) the ESPP prospectus; and
- (c) Employee Information Supplement (collectively, the “Additional Documents”).

The Additional Documents provide further information to help me make an informed investment decision about participating in the ESPP. Neither the ESPP nor the ESPP prospectus is a prospectus for the purposes of the Corporations Act 2001.

I should not rely upon any oral statements made in relation to this offer. I should rely only upon the statements contained in the Agreement (including this Appendix) and the Additional Documents when considering participation in the ESPP.

Notifications

Exchange Control Information. Exchange control reporting is required for cash transactions exceeding AUD10,000 and international fund transfers. I understand that the Australian bank assisting with the transaction may file the report for me. If there is no Australian bank involved in the transfer, I will have to file the report. I acknowledge that I should consult with a personal advisor to ensure that I am properly complying with applicable reporting requirements in Australia.

Securities Law Information. Investment in Common Stock involves a degree of risk. Eligible employees who elect to participate in the Plan should monitor their participation and consider all risk factors relevant to the acquisition of Common Stock under the ESPP as set forth below and in the Additional Documents.

The information herein is general information only. It is not advice or information that takes into account my objectives, financial situation and needs. I should consider obtaining my own financial product advice from a person who is licensed by ASIC to give such advice.

Additional Risk Factors for Australian Residents. I should have regard to risk factors relevant to investment in securities generally and, in particular, to holding shares of Common Stock. For example, the price at which an individual share of Common Stock is quoted on The Nasdaq Global Select Market (“Nasdaq”) may increase or decrease due to a number of factors. There is no guarantee that the price of a share of Common Stock will increase. Factors that may affect the price of the Common Stock include fluctuations in the domestic and international market for listed stocks, general economic conditions, including interest rates, inflation rates, commodity and oil prices, changes to government fiscal, monetary or regulatory policies, legislation or regulation, the nature of the markets in which the Company operates and general operational and business risks.

More information about potential factors that could affect the Company’s business and financial results will be included in the Company’s most recent Annual Report on Form 10-K and the Company’s Quarterly Report on Form 10-Q. Copies of these reports are available at www.sec.gov, on the Company’s investor’s page at <https://investors.paloaltonetworks.com/investor-relations/financials/sec-filings/default.aspx>, and upon request to the Company.

In addition, Participant should be aware that the Australian dollar (“AUD”) value of any shares of Common Stock acquired under the ESPP will be affected by the USD/AUD exchange rate. Participation in the ESPP involves certain risks related to fluctuations in this rate of exchange.

Common Stock in a U.S. Corporation. Common stock of a U.S. corporation is analogous to ordinary shares of an Australian corporation. Each holder of a share of Common Stock is entitled to one vote. Dividends may be paid on the shares of Common Stock out of any funds of the Company legally available for dividends at the discretion of the Board. Further, the Common Stock is not liable to any further calls for payment of capital or for other assessment by the Company and have no sinking fund provisions, pre-emptive rights, conversion rights or redemption provisions.

Ascertaining the Market Price of Shares. I may ascertain the current market price of the Common Stock as traded on The Nasdaq Global Select Market under the symbol “PANW” at <https://www.nasdaq.com/market-activity/stocks/panw>. The AUD equivalent of that price can be obtained at www.rba.gov.au/statistics/frequency/exchange-rates.html. *Please note that this is not a prediction of what the market price of the Common Stock will be on any applicable Exercise Date or when shares of Common Stock are issued to me (or at any other time), or of the applicable exchange rate at such time.*

AUSTRIA

Terms and Conditions

Interest Waiver. By enrolling in the ESPP and accepting the terms of the Agreement, I unambiguously consent to waive my right to any interest with respect to payroll deductions accumulated for me during an Offering Period.

Amount of Contribution. My individual payroll deductions are subject to compliance with the minimum salary and minimum subsistence level provisions under Applicable Laws in Austria. The Company and/or the Employer, at their discretion, may limit the amount of my payroll deductions to comply with such requirements.

Notifications

Securities Law Information. The Company has prepared and made available an Information Document in reliance on an exemption from prospectus requirements that may otherwise apply to the offer of the ESPP in Austria. The Information Document is attached hereto as Exhibit C.

Exchange Control Information. If I hold securities (including shares of Common Stock acquired under the ESPP outside Austria, even if I hold them outside of Austria with an Austrian bank) or cash (including proceeds from the sales of shares of Common Stock), I understand I must submit an annual report to the Austrian National Bank using the form “*Standmeldung/Wertpapiere.*” An exemption applies if the value of the shares held outside Austria of any quarter does not exceed €5,000,000. The deadline for filing the quarterly report is the 15th of the month following the end of the respective quarter.

If I sell shares of Common Stock or receive any cash dividends, there may be exchange control obligations if the cash received is held outside Austria, as a separate reporting requirement applies to any non-Austrian cash accounts. If the transaction volume of all of my cash accounts abroad exceeds €10,000,000, the movements and the balance of all accounts must be reported monthly, as of the last day of the month, on or before the 15th day of the following month, using the form “*Meldungen SI-Forderungen und/oder SI-Verpflichtungen.*”

BELGIUM

Terms and Conditions

Authorization to Remit Eligible Cash Earnings. For Belgian law purposes, I understand that “payroll deductions” means a specific instruction to the Employer to pay out part of my Compensation (as indicated in the Agreement) in order to fund the Purchase Price for the shares of Common Stock, in accordance with the terms and conditions of the ESPP.

Notifications

Exchange Control Information. I acknowledge and understand that if I am a Belgian resident, I am required to complete a report providing the National Bank of Belgium with details regarding any securities or bank accounts held outside Belgium, including the account number, the name of the bank in which such account is held and the country in which the account is located. This report, as well as information on how to complete it, can be found on the website of the National Bank of Belgium, www.nbb.be, under the *Kredietcentrales / Centrales des credits* caption.

BRAZIL

Terms and Conditions

Authorization for Transmission of Funds. I agree to execute a letter of authorization and any other agreements or consents that may be required to enable the Company, any Subsidiary or Affiliate or the Employer to remit accumulated payroll deductions from Brazil to the United States for the purchase of shares of Common Stock. I understand that if I fail to execute the letter of authorization or any other agreements or consents that may be required for the remittance of payroll deductions, I will not be able to participate in the ESPP.

Compliance with Law. By enrolling in the ESPP and accepting the terms of this Agreement, I acknowledge and agree to comply with all applicable Brazilian laws and pay any and all applicable taxes associated with the purchase and sale of shares of Common Stock acquired pursuant to the ESPP and the receipt of any dividends paid on such shares.

Nature of Grant. The following provision supplements Section 5 of the Global Subscription Agreement:

By enrolling and participating in the ESPP, I agree that (i) I am making an investment decision and (ii) the value of the shares of Common Stock is not fixed and may increase or decrease in value without compensation to me.

Notifications

Exchange Control Information. If I am a resident or domiciled in Brazil, I will be required to submit an annual declaration of assets and rights held outside of Brazil to the Central Bank of Brazil if the aggregate value of such assets and rights is equal to or greater than US\$1,000,000.

Quarterly reporting is required if the aggregate value of such assets and rights exceeds US\$100,000,000. Assets and rights that must be reported include shares of Common Stock acquired pursuant to the ESPP.

CANADA

Terms and Conditions

Termination of Service. The following provision replaces Section 5(j) of the Global Subscription Agreement:

In the event of termination of my employment (for any reason and whether or not later found to be invalid or in breach of Canadian laws or the terms of my employment agreement, if any), my right to participate in the ESPP, if any, shall terminate effective as of the date that is the earlier of (i) the date of my termination or (ii) the date I receive notice of termination. In either case, the date shall exclude any period during which notice, pay in lieu of notice or related payments or damages are provided or required to be provided under local law. For greater certainty, I will not purchase or be entitled to any pro-rated purchase of shares for that portion of time before the date on which my participation terminates, nor will I be entitled to any compensation for lost purchase.

Notwithstanding the foregoing, if applicable employment standards legislation explicitly requires continued participation in the ESPP during a statutory notice period, I acknowledge my right to participate in the ESPP, if any, will terminate effective as of the last day of my minimum statutory notice period, but I will not earn or be entitled to any pro-rated purchase of shares if the Exercise Date falls after the end of my statutory notice period, nor will I be entitled to any compensation for the lost purchase of shares.

The following provision applies if I reside in Quebec:

Data Privacy. This provision supplements the Data Privacy Provisions for Participants who reside outside of European Union / European Economic Area member states, Switzerland and the United Kingdom above in this Appendix:

I hereby authorize the Company and the Company's representatives to discuss with and obtain all relevant information from all personnel, professional or not, involved in the administration and operation of the ESPP. I further authorize the Company or any Subsidiary or Affiliate and the Administrator to disclose and discuss the ESPP with their advisors. I acknowledge and agree that my personal information, including sensitive personal information, may be transferred or disclosed outside the Province of Quebec, including to the United States. I further authorize the Company or any Subsidiary or Affiliate to record such information and to keep such information in my employee file. I also acknowledge and authorize the Company and other parties involved in the administration of the ESPP to use technology for profiling purposes and to make automated decisions that may have an impact on me or the administration of the ESPP.

Notifications

Securities Law Information. I acknowledge that I am permitted to sell shares of Common Stock acquired pursuant to the ESPP through the designated broker appointed under the ESPP, if any, provided the sale of the shares acquired pursuant to the ESPP takes place outside of Canada through the facilities of a stock exchange on which the shares are listed (*i.e.*, the Nasdaq Stock Market).

CHINA

Terms and Conditions

The following provisions will apply if I am subject to exchange control restrictions and requirements in the People's Republic of China ("PRC"), including the requirements imposed by the State Administration of Foreign Exchange ("SAFE") as determined by the Company in its sole discretion:

Purchase Conditioned on Satisfaction of Regulatory Obligations. Notwithstanding anything to the contrary in the Agreement or the ESPP, no shares of Common Stock will be purchased on my behalf unless and until all necessary exchange control or other approvals with respect to the ESPP have been obtained from SAFE or its local counterpart ("SAFE Approval") and maintained prior to each Exercise Date. In the event SAFE Approval has not been obtained or maintained prior to any Exercise Date(s), the Company may return payroll deductions credited to my account but not used to purchase shares during the Purchase Period, without interest, or take such other steps as it determines in its sole discretion to be necessary for the implementation of the ESPP. In such case, participation in the ESPP will continue, unless I otherwise withdraw from or becomes ineligible to participate in the ESPP.

Shares Must Remain With Company's Designated Broker. I agree to hold any shares of Common Stock acquired under the ESPP with E*TRADE, or such other broker as the Company may designate, until the shares are sold. The limitation shall apply to all shares issued to me under the ESPP, whether or not I remain an Eligible Employee.

Sale of Shares. Due to local regulatory requirements, I understand and agree that the Company may require that any shares of Common Stock purchased under the ESPP be immediately sold.

I further agree that the Company is authorized to instruct its designated broker to assist with the mandatory sale of such shares (on my behalf pursuant to this authorization without further consent) and I expressly authorize the Company's designated broker to complete the sale of such shares. In this regard, I agree to sign any agreements, forms and/or consents that may be reasonably requested by the Company (or the Company's designated broker) to effectuate the sale of the shares (including, without limitation, as to the transfers of the proceeds and other exchange control matters noted below) and shall otherwise cooperate with the Company with respect to such matters, provided that I shall not be permitted to exercise any influence over how,

when or whether the sales occur. I acknowledge that the Company's designated broker is under no obligation to arrange for the sale of the shares at any particular price.

If the Company, in its discretion, does not exercise its right to require the automatic sale of the shares purchased under the ESPP, as described in the preceding paragraph, I understand and agree that any shares acquired under the ESPP must be sold no later than six months from my termination of employment, or within any such other period as may be permitted by the Company or required by SAFE. I understand that any shares acquired under the ESPP that have not been sold within six months of my termination or within such other period as may be permitted by the Company or required by SAFE will be automatically sold by the designated broker pursuant to this authorization without further consent and subject to the terms of the preceding paragraph.

Upon the sale of the shares, I will receive the cash proceeds from the sale, less any brokerage fees or commissions and subject to any obligation to satisfy any Tax-Related Items. I agree to comply with all requirements the Company may impose in order to facilitate compliance with exchange control requirements in China prior to receipt of the cash proceeds. I acknowledge that I am not aware of any material nonpublic information with respect to the Company or any securities of the Company as of the date of the Agreement.

Exchange Control Requirements. By enrolling and participating in the ESPP, I understand and agree that, pursuant to local exchange control requirements, I will be required to repatriate the cash proceeds from the sale of the shares and the receipt of any dividends to China. I further understand that, under local law, such repatriation of the cash proceeds may need to be effectuated through a special exchange control account established by the Company, the Employer or another Subsidiary or Affiliate, and I hereby consent and agree that any proceeds from the sale of any shares I acquire under the ESPP and any dividends may be transferred to such special account prior to being delivered to me.

I further understand that the proceeds will be delivered to me as soon as possible, but there may be delays in distributing the funds to me due to exchange control requirements in China. Proceeds may be paid to me in U.S. dollars or local currency, at the Company's discretion. If the proceeds are paid in U.S. dollars, I will be required to set up a U.S. dollar bank account in China so that the proceeds may be deposited into this account. If the proceeds are paid in local currency, I agree that the Company, the Employer or any other Subsidiary or Affiliate in China is under no obligation to secure any particular exchange conversion rate and there may be delays in converting the cash proceeds to local currency due to exchange control restrictions. I agree to bear any currency fluctuation risk between the time the cash proceeds are received and the time the cash proceeds are distributed to me through the special account described above.

I further agree to comply with any other requirements that may be imposed by the Company in the future in order to facilitate compliance with exchange control requirements in China.

Additional Restrictions. No shares of Common Stock will be purchased or issued unless the Company determines that such purchase and issuance and delivery of shares complies with all

Applicable Laws. Further, the Company is under no obligation to purchase and/or issue shares if the Company's SAFE approval becomes invalid or ceases to be in effect by the Exercise Date.

COSTA RICA

Terms and Conditions

Authorization for Payroll Deductions. I hereby expressly acknowledge that my authorization to the Employer to withhold a percentage of my Compensation, as specified in the Global Subscription Agreement, was given voluntarily for purposes of my participation in the ESPP.

CZECH REPUBLIC

Terms and Conditions

Payroll Deduction Authorization. I hereby authorize the Employer to take payroll deductions from each of my paychecks during the Offering Period at the percentage of my Compensation (from 1% to 15%) as indicated on the online enrollment page. I understand that, by electronically accepting this Agreement, I am executing the attached Agreement on Wage Deductions. I understand I will not be able to participate in the ESPP if I fail to execute the Agreement on Wage Deductions.

Notifications

Exchange Control Information. The Czech National Bank may require me to fulfill certain notification duties in relation to the purchase of shares of Common Stock under the ESPP and/or the opening and maintenance of a foreign bank or brokerage account. In addition, I may need to report certain events even in the absence of a request from the Czech National Bank. Because exchange control regulations may change without notice, I should consult my personal legal advisor prior to the purchase or the sale of shares of Common Stock to ensure compliance with current regulations. It is my responsibility to comply with any applicable Czech exchange control laws.

DOHODA O SRÁŽKÁCH ZE MZDY

(dále jen „Dohoda“)

uzavřená podle zákona č. 262/2006 Sb., zákoníku práce (dále jen „zákoník práce“) mezi:

Palo Alto Networks (Czech) s.r.o., společností založenou a existující podle práva České republiky, se sídlem Město, Czech Republic, IČO: 038 66 149, dále jen „Zaměstnavatel“,

a

zaměstnancem, který se elektronicky přihlásil k účasti v Doplněném a přepracovaném obecném plánu Palo Alto Networks, Inc. 2012 Employee Stock Purchase Plan („Plán“) a jehož datum narození a trvalé bydliště jsou vedeny v záznamech Palo Alto Networks, Inc., dále jen „Zaměstnanec“,

Zaměstnanec a Zaměstnavatel dále také jen společně jako „Strany“ či jednotlivě jako „Strana“.

1. Zaměstnanec je oprávněn účastnit se Plánu a kupovat kmenové akcie („Akcie“), společnosti Palo Alto Networks, Inc., se sídlem 3000 Tannery Way, Santa Clara, California 95054, U.S.A. („Společnost“), a to za podmínek stanovených Plánem a jakoukoliv dodatečnou dohodou o zápise, uzavřenou mezi Zaměstnancem a Společností. Není-li v slovně uvedeno jinak, jednotlivé termíny a definice užívané v této Dohodě mají v znam, který je jim připisován v Plánu.

2. Zaměstnanec bude hradit svůj příspěvek na kupní cenu Akcií dle Plánu, a to prostřednictvím srážek ze mzdy Zaměstnance, vyplácené mu Zaměstnavatelem, a to počínaje prvním platebním termínem následujícím po zápise Zaměstnance do Plánu. Zaměstnanec tímto dává souhlas Zaměstnavateli, aby Zaměstnavatel prováděl jednou za každý kalendářní měsíc srážku ze mzdy Zaměstnance (ve smyslu § 145 zákoníku práce podle ustanovení § 146 písm. b) zákoníku práce a článků 3.01 a 6 Plánu) ve výši, která nepřesáhne 25 000 USD (v českých korunách) v hodnotě akcií za kalendářní rok, odpovídající procentu ze mzdy Zaměstnance (jak je definována v Plánu), které se Zaměstnanec rozhodl přispívat po zápise do Plánu. Jestliže Zaměstnanec následně zvýší či sníží procento svého příspěvku (jak je povoleno v podmínkách Plánu), výše srážek Zaměstnance se adekvátně změní. Mimoto pokud se změni mzda Zaměstnance, výše srážek se může adekvátně změnit.

Například, pokud mzda Zaměstnance v měsíci po zápise činí 100 000 Kč a Zaměstnanec se rozhodl přispívat 10% své

AGREEMENT ON WAGE DEDUCTIONS

(hereinafter referred to as the “Agreement”)

concluded pursuant to Act No. 262/2006, the Labor Code (hereinafter referred to as the “Labor Code”), between:

Palo Alto Networks (Czech) s.r.o., a company established and existing under the laws of the Czech Republic, with its registered seat at Město, Czech Republic, Identification No.: 038 66 149 hereinafter referred to as the “Employer”,

and

The employee who has electronically enrolled in the Palo Alto Networks, Inc. 2012 Employee Stock Purchase Plan (“Plan”) and whose date of birth and home address are maintained in the records of Palo Alto Networks, Inc., hereinafter referred to as the “Employee.”

Employee and Employer are hereinafter also referred to jointly as “Parties” or individually as a “Party.”

1. The Employee is eligible to participate in the Plan and to purchase shares of common stock (“Shares”) of Palo Alto Networks, Inc., with registered address at 3000 Tannery Way, Santa Clara, California 95054, U.S.A. (“Company”), under the terms and conditions of the Plan and any additional subscription agreement entered into between the Employee and the Company. Unless explicitly stated otherwise, individual terms and definitions used herein have the meaning assigned to them in the Plan.

2. The Employee will pay his/her contributions to purchase Shares under the Plan by way of deductions from wages paid to the Employee by the Employer, starting with the first pay day following the Enrollment Date. The Employee hereby grants his/her consent to the Employer to make deductions once per calendar month (pursuant to Sec. 145 of the Labor Code pursuant to Sec. 146 (b) of the Labor Code and Sections 3.01 and 6 of the Plan) to the extent not to exceed USD 25,000 (in Czech crowns) worth of stock per calendar year that reflects the percentage of the Employee’s Compensation (as defined in the Plan) that he or she has elected to contribute upon enrollment in the Plan. If the Employee subsequently increases or decreases his/her contribution percentage (as permitted under the terms of the Plan), the amount of the Employee’s deductions will change accordingly. In addition, if the Employee’s Compensation changes, the amount of the deductions may change accordingly.

By way of example, if the Employee’s Compensation in the month after enrollment is CZK 100,000 and the Employee has elected to contribute 10% of his or her Compensation to purchase Shares

mzdy na nákup Akcií dle Plánu, Zaměstnavatel je oprávněn provést srážku 10 000 Kč ze mzdy Zaměstnance v měsíci po Dni zápisu. Jestliže se mzda Zaměstnance zvýší na 120 000 Kč v následujícím měsíci, Zaměstnavatel je oprávněn provést srážku 12 000 Kč ze mzdy Zaměstnance. Jestliže Zaměstnanec sníží procento svého příspěvku na 5% v následujícím měsíci, Zaměstnavatel je oprávněn provést srážku 6 000 Kč ze mzdy Zaměstnance.

under the Plan, the Employer is authorized to deduct CZK 10,000 from the Employee's Compensation in the month after the Enrollment Date. If the Employee's Compensation increases to CZK 120,000 in a subsequent month, the Employer is authorized to deduct CZK 12,000 from the Employee's Compensation in the month of the increase. If the Employee decreases his or her contribution percentage to 5% in a subsequent month, the Employer is authorized to deduct CZK 6,000 from the Employee's Compensation.

3. Zaměstnavatel se zavazuje poukazovat provedené srážky ze mzdy dle této Dohody Společnosti, a to do 30 dnů od data zakoupení. Zaměstnavatel je oprávněn použít sražené finanční prostředky dle této Dohody výhradně v souladu s podmínkami a pravidly uvedenými v této Dohodě a Plánu a vrátit jakékoliv srážky Zaměstnanci, pokud to vyžaduje Plán.

4. Zaměstnanec potvrzuje a souhlasí s tím, že veškeré srážky ze mzdy Zaměstnance provedené v minulosti v souvislosti s účastí Zaměstnance na Plánu byly v souladu s českým právem a Zaměstnanec dal se všemi těmito srážkami řádně souhlas.

5. Tato Dohoda zaniká:

- a) pokud je (písemně) vypovězena jakoukoliv Stranou; nebo
- b) pokud je ukončena účast Zaměstnance v Plánu, jak je stanoveno v Plánu (včetně situace, kdy Zaměstnanec ukončí pracovní poměr nebo odstoupí od Plánu).

6. Tato Dohoda je vyhotovena v českém a anglickém jazyce. Rozhodující je české znění této Dohody. Každá Strana obdrží jedno vyhotovení této Dohody. Jakékoli změny této Dohody mohou být učiněny jen písemnou dohodou podepsanou oběma Stranami.

Obě Strany tímto prohlašují a potvrzují, že tato Dohoda byla uzavřena po vzájemném projednání a to svobodně, vážně a určitě, nikoliv v tísní za nápadně nevýhodných podmínek a na důkaz toho Strany vyjadřují osobně či prostřednictvím svých zástupců svůj souhlas.

3. The Employer undertakes to remit the wage deductions under this Agreement to the Company within 30 days prior to the Exercise Date. The Employer is entitled to use such wage deductions solely in accordance with the terms and conditions of this Agreement and the Plan, and to refund any deductions to the Employee, if required by the Plan.

4. The Employee acknowledges and agrees that any past deductions from the Employee's Compensation with respect to the Employee's participation in the Plan complied with Czech law and the Employee duly authorized all such deductions.

5. This Agreement terminates:

- (a) if it is terminated (in writing) by either Party; or
- (b) when the Employee's participation in the Plan is terminated, as set forth in the Plan (including if the Employee terminates employment or withdraws from the Plan).

6. This Agreement has been executed in Czech and English language. The Czech language version of this Agreement shall be decisive. Each Party will receive one version of this Agreement. Any change(s) to this Agreement may only be made by a written agreement signed by both Parties.

Both Parties represent and declare that this Agreement has been concluded upon mutual discussion, freely, seriously and definitely and not under strikingly unfavorable conditions, in witness whereof, the Parties themselves or through their representatives have agreed hereto.

DENMARK

Terms and Conditions

Danish Stock Option Act. By accepting the option to purchase shares of Common Stock and enrolling in the ESPP, I acknowledge that I have received the Employer Statement translated into Danish and set forth below, which is being provided to comply with the Danish Stock Option Act (the “Act”).

I acknowledge that the Act has been amended as of January 1, 2019. Accordingly, I agree that in the event of termination of my employment, the provisions governing my participation in the ESPP under this Agreement and the ESPP will apply for any Offering Period which begins on or after January 1, 2019. The relevant provisions are detailed in the Agreement, the ESPP and the Employer Statement.

EMPLOYER STATEMENT

Pursuant to Section 3(1) of the Act on Stock Options in employment relations (the "Stock Option Act"), you are entitled to receive the following information regarding the PALO ALTO NETWORKS, Inc. 2012 Employee Stock Purchase Plan (the "ESPP") in a separate written statement.

This statement contains information applicable to your participation in the ESPP, as required under the Stock Option Act. Additional terms and conditions of the ESPP are described in the ESPP and other subscription materials, which have been made available to you. In the event of a conflict between a provision contained in this Employer Statement and the provisions contained in the ESPP subscription materials, this Employer Statement shall prevail. Capitalized terms used but not defined herein shall have the same meaning as terms defined in the ESPP.

1. Time of grant of right to purchase stock under the ESPP

Provided you are eligible to participate in the ESPP and decide to enroll in the ESPP, consistent with the requirements of the ESPP, you will be granted a right to purchase shares of stock of PALO ALTO NETWORKS, Inc. (the "Company") at the beginning of each Offering Period, as defined in the ESPP, as long as you remain enrolled in the ESPP.

For each Offering Period, you may elect to have payroll deductions from each paycheck in the amount of a specific percentage of your Compensation on each payday (from 1 to 15%). Your participation in the ESPP is subject to the additional terms and conditions provided in the ESPP materials.

2. Terms or conditions for grant of a right to future purchases of stock.

The ESPP is offered at the discretion of the Company's Board of Directors. The Company may terminate, suspend or amend the ESPP at any time and without the consent of the participating employees.

3. Purchase Date

On the last day of each Purchase Period, or the next trading day, if the last day is not a trading day (i.e., the Exercise Date), shares of common stock of the Company will automatically be purchased for you with your accumulated payroll deductions. The number of shares purchased will depend upon the Purchase Price, as defined below, and the amount of accumulated payroll deductions. You will become the immediate owner of the shares purchased and you may then sell your shares at any time.

4. Purchase Price

The Purchase Price per share shall mean an amount equal to 85% of the lesser of (a) the Fair Market

ARBEJDSGIVERERKLÆRING

I henhold til § 3, stk. 1, i lov om brug af køberet eller tegningsret mv. i ansættelsesforhold ("Aktieoptionsloven") er du berettiget til i en særskilt skriftlig erklæring at modtage følgende oplysninger vedrørende PALO ALTO NETWORKS, Inc.'s medarbejderaktieordning "2012 Employee Stock Purchase Plan" (i det følgende kaldet "ESPP").

Denne erklæring indeholder de i henhold til Aktieoptionsloven krævede oplysninger vedrørende din deltagelse i ESPP. Yderligere kriterier og betingelser for ordningen er beskrevet i ESPP og det andet tegningsmateriale, som du har fået udleveret. I tilfælde af uoverensstemmelser mellem en bestemmelse i denne Arbejdsgivererklæring og bestemmelserne i ESPP-tegningsmateriale skal denne Arbejdsgivererklæring have forrang. Begreber, der står med stort begyndelsesbogstav i denne Arbejdsgivererklæring, men som ikke er defineret heri, har samme betydning som de i ESPP definerede begreber.

Tidspunktet for tildeling af retten til at købe aktier i henhold til ESPP

Forudsat at du er berettiget til at deltage i ESPP samt beslutter dig for at tilmelde dig ESPP, vil du i overensstemmelse med kravene i ESPP få tildelt en ret til at købe aktier i PALO ALTO NETWORKS, Inc. ("Selskabet") ved starten af hver Udbudsperiode (som defineret i ESPP), så længe du vedbliver at være tilmeldt ESPP.

For hver Udbudsperiode kan du vælge, at der i forbindelse med hver lønudbetaling fra din løn trækkes et beløb svarende til en bestemt procentdel af dit Vederlag (fra 1 til 15%). Din deltagelse i ESPP er underlagt de yderligere kriterier og betingelser, som fremgår af ESPP-materialet.

2. Kriterier eller betingelser for tildeling af retten til senere at købe aktier

ESPP udbydes efter Selskabets bestyrelses frie skøn. Selskabet har til enhver tid ret til at ophæve, afbryde eller ændre ESPP uden de deltagende medarbejderses samtykke.

3. Købsdato

På den sidste dag i hver købsperiode, eller, hvis denne dag ikke er en handelsdag, på den næstfølgende handelsdag efter den sidste dag i hver Udbudsperiode (dvs. Udnyttelsesdatoen) vil der automatisk blive købt ordinære aktier i Selskabet til dig for det akkumulerede beløb, der er fratrukket dine lønudbetalinger. Antallet af købte aktier afhænger af Købskursen (som defineret nedenfor) og det akkumulerede beløb, der er fratrukket dine lønudbetalinger. Du bliver den umiddelbare ejer af de købte aktier, og du kan til enhver tid sælge dine aktier.

4. Købskurs

Value, as defined in the ESPP, of a share of common stock on the Enrollment Date; or (b) the Fair Market Value, as defined in the ESPP, of a share of common stock on the Exercise Date.

5. Your rights upon termination of employment

The treatment of your ESPP rights upon termination of employment will be determined in accordance with the termination provisions in the ESPP and the ESPP subscription materials, pursuant to which your right to purchase shares under the ESPP will terminate immediately as of the date you cease to actively provide services.

6. Financial aspects of participating in the ESPP

Aside from the payroll deductions which will start after you enroll in the ESPP, the ESPP offering has no immediate financial consequences for you. The value of the shares purchased for you under the ESPP are not taken into account when calculating holiday allowances, pension contributions or other statutory consideration calculated on the basis of salary.

Shares of stock are financial instruments and investing in stock will always have financial risk. The possibility of profit at the time you sell your shares will not only be dependent on the Company's financial development, but also on the general development of the stock market, among other things. In addition, after you purchase shares, the shares could decrease in value even below the Purchase Price.

Stock Plan Services

Købskursen pr. aktie betyder et beløb svarende til 85% af det laveste af de to følgende beløb: (a) Markedskursen (som defineret i ESPP) på en ordinær aktie på Tilmeldingsdato eller (b) Markedskursen (som defineret i ESPP) på en ordinær aktie på Udnyttelsesdatoen.

5. Din retsstilling i forbindelse med fratreden

I tilfælde af dit ansættelsesforholds ophør vil dine ESPP-rettigheeder blive behandlet i overensstemmelse med fratrædelsesbestemmelserne i ESPP og ESPP- tegningsmaterialet, ifølge hvilke din ret til at købe aktier i henhold til ESPP ophører øjeblikkeligt med virkning fra det tidspunkt, hvor du ophører med aktivt at levere ydelser.

6. Økonomiske aspekter ved at deltage i ESPP

Bortset fra de fradrag i din løn, der vil blive påbegyndt, når du har tilmeldt dig ESPP, har ESPP-udbuddet ikke nogen umiddelbare økonomiske konsekvenser for dig. Værdien af de aktier, der købes til dig i henhold til ESPP, indgår ikke i beregningen af feriepenge, pensionsbidrag eller øvrige vederlagsafhængige lovpligtige ydelser.

Aktier er finansielle instrumenter, og investering i aktier vil altid være forbundet med en økonomisk risiko. Muligheden for en gevinst på det tidspunkt, hvor du sælger dine aktier, afhænger ikke kun af Selskabets økonomiske udvikling, men også bl.a. af den generelle udvikling på aktiemarkedet. Derudover kan aktiernes værdi efter købstidspunktet falde til en værdi, der ligger under Købsprisen.

Aktieordningsadministrationen

FINLAND

There are no country-specific provisions.

FRANCE

Terms and Conditions

French Translation. The following is a French translation of Section 2 of the Global Subscription Agreement:

Montant de la Contribution. *Par la présente, j'autorise des déductions sur mon salaire d'un pourcentage de ma Rémunération (de 1% à 15%) sur chacune de mes fiches de paie de chaque jour de paie, tel qu'indiqué sur la page de souscription en ligne (et, comme j'ai la possibilité de modifier, dans la mesure permise par le Plan d'Achat d'Actions et de l'Administrateur), et ce durant toute la Période d'Offre en vertu du Plan d'Achat d'Actions. (Merci de noter qu'aucune décimale n'est autorisée dans les pourcentages). Je reconnais qu'un pourcentage de ma Rémunération inférieur à celui indiqué par moi peut être cotisé si nécessaire pour se conformer aux lois applicables (en particulier les lois applicables relatives aux exigences de salaire minimum).*

Je comprends que le Plan d'Achat d'Actions est un régime volontaire et je reconnais que toutes les retenues salariales que je choisis de cotiser à le Plan d'Achat d'Actions sont effectuées sur une base entièrement volontaire. Je comprends que ces déductions opérées sur mon salaire seront accumulées pour l'achat des Actions au Prix d'Achat applicable déterminé en vertu du Plan d'Achat d'Actions. Je comprends également que, sous réserve des dispositions du Plan d'Achat d'Actions, je peux modifier le taux de mes retenues salariales ou librement me retirer de la participation au Plan d'Achat d'Actions (par le biais du processus électronique désigné par la Société) et recevoir un remboursement intégral de toutes les contributions volontaires que j'ai versées dans le cadre de le Plan d'Achat d'Actions qui n'ont pas été affectées à l'achat d'Actions. Enfin, je comprends que si je ne me retire pas durant la Période d'Offre, toute accumulation de déductions sur mon salaire serait automatiquement utilisée pour exercer mon option et acheter des Actions en vertu du Plan d'Achat d'Actions.

À moins que je ne me retire du Plan d'Achat d'Actions, ou que je ne devienne inéligible au Plan d'Achat d'Actions, ou à moins que le Plan d'Achat d'Actions ne soit dénoncé par la Société, je continuerai à souscrire au Plan d'Achat d'Actions au cours des Périodes d'Offres suivantes et les Actions seront acquises en mon nom à la Date d'Exercice applicable avec le montant total des déductions effectuées sur mon salaire. La souscription au Plan d'Achat d'Actions continuera d'être régie par cet Accord et le Plan d'Achat d'Actions. A sa discrétion et dans la mesure permise par le Plan d'Achat d'Actions, la Société pourra modifier le Plan d'Achat d'Actions et/ou cet Accord, et en continuant à souscrire au Plan d'Achat d'Actions, sans avoir besoin de fournir un consentement exprès, j'accepte les termes et conditions du Plan d'Achat d'Actions modifié et/ou de l'Accord.

J'accepte de signer un accord de participation distinct avec la Société ou l'Employeur (tel que défini ci-dessous), ou tout autre accord ou consentement qui pourrait être requis par la Société ou l'Employeur dans le cadre de cette autorisation, maintenant ou à l'avenir. Je comprends que je ne pourrai pas participer à le Plan d'Achat d'Actions si je n'exécute pas un tel consentement ou accord.

Language Consent. By enrolling in the ESPP, I confirm having read and understood the documents relating to the grant of the option to purchase shares of Common Stock under the ESPP, which were provided in the English language. I accept the terms of those documents accordingly.

Accord sur la langue. *En souscrivant au Plan d'Achat d'Actions, je confirme avoir lu et compris les documents en lien avec l'octroi du droit d'acquérir des actions en vertu du Plan d'Achat d'Actions, lesquels m'ont été communiqués en langue anglaise. J'accepte les termes de ces documents en connaissance de cause.*

GERMANY

Notifications

Securities Law Information. The Company has prepared and made available an Information Document in reliance on an exemption from prospectus requirements that may otherwise apply to the offer of the ESPP in Germany. The Information Document is attached hereto as Exhibit C.

Exchange Control Information. Cross-border payments in excess of €12,500 must be reported monthly to the German Federal Bank (*Bundesbank*). If the value of the shares of Common Stock purchased under the ESPP or the payments received in connection with securities (including proceeds realized upon the sale of shares of Common Stock or from the receipt of any dividends paid on such shares) exceed €12,500, the report must be made by the 5th day of the month following the month in which the payment was received. The form of report (“*Allgemeine Meldeportal Statistik*”) can be accessed via the *Bundesbank's* website (www.bundesbank.de) and is available in both German and English. I understand that I am responsible for making this report.
www.sec.gov,

GREECE

There are no country-specific provisions.

HONG KONG

Notifications

Securities Warning. *The option to purchase shares of Common Stock and the issuance of shares of Common Stock upon purchase do not constitute a public offer of securities under Hong Kong law and are available only to Eligible Employees. The ESPP, the Agreement, this Appendix and*

other incidental communication materials that I may receive have not been prepared in accordance with and are not intended to constitute a “prospectus” for a public offering of securities under applicable securities laws in Hong Kong. Furthermore, none of the documents relating to the ESPP have been reviewed by any regulatory authority in Hong Kong. I understand that I should exercise caution in relation to the offer. If I am in any doubt about any of the contents of the ESPP, the Agreement, this Appendix or any other communication materials, I should obtain independent professional advice.

HUNGARY

Terms and Conditions

Authorization for Payroll Deductions. I understand that as a condition of my participation in the ESPP, I will be required to execute the attached Consent for Deduction form. I understand that, by electronically accepting this Agreement, I am executing the attached Consent for Deduction form. I understand that I will not be able to participate in the ESPP until the Company receives my executed form.

(Consent for Deduction form on next page)

CONSENT FOR DEDUCTION HOZZÁJÁRULÁS LEVONÁSHOZ

I, the undersigned, in order to participate in the Palo Alto Networks, Inc. Alulírott, a Palo Alto Networks, Inc. 2012 Munkavállalói 2012 Employee Stock Purchase Plan (“ESPP”), authorize my employer Részvényvásárlási Programjában (“Program”) való részvételem to withhold payroll deductions in the amount of my Compensation Iérdekében felhatalmazom a munkáltatóm, hogy a nettó munkabéremből indicated on the online enrollment page, or such other percentage as levonja a Kompenzációnak az általam az online jelentkezési oldalon subsequently selected by me under the ESPP. I understand that this megjelölt összegét, vagy az általam a Program ideje alatt a későbbiekben amount must not be less than 1% and not more than 15% of my meghatározott százalékát. Tudomásul veszem, hogy ez az összeg nem Compensation for any purchase period with the reservation that the lehet kevesebb, mint a Kompenzációm egy százaléka és nem haladhatja deductions are made in accordance with the applicable provisions of the meg annak tizenöt százalékát egyetlen vásárlási időszakban sem, feltéve, Hungarian labor law. hogy a levonások a magyar munkajog vonatkozó rendelkezéseinek megfelelően történtek.

I acknowledge and agree that any past payroll deductions from my Compensation with respect to my participation in the ESPP complied Tudomásul veszem és elfogadom, hogy a Kompenzációból korábban a with Hungarian law and that I authorized all such deductions. Programban való részvételemre tekintettel teljesített levonások a magyar All the terms written in capital letters shall have the meanings given to jogszabályoknak megfelelően történtek, és ezen levonásokhoz them in the ESPP. hozzájárultam.

Valamennyi nagybetűs fogalom a Programban

In case of any discrepancies between the Hungarian language version of meghatározott jelentéssel bír. this document and its English language version, the Hungarian language version shall prevail.

Jelen dokumentum magyar és angol nyelvű változata közötti bármilyen eltérés esetén a magyar nyelvű változat az irányadó.

INDIA

Notifications

Exchange Control Information. I understand that I must repatriate any proceeds from the sale of shares of Common Stock purchased under the ESPP and any dividends received in relation to the shares of Common Stock to India and convert the proceeds into local currency within such period of time as required under applicable regulations). I should obtain a foreign inward remittance certificate (the “FIRC”) from the bank where I deposit the foreign currency and maintain the FIRC as evidence of the repatriation of funds in the event the Reserve Bank of India or the Employer requests proof of repatriation.

INDONESIA

Terms and Conditions

Language Consent. By enrolling and participating in the ESPP, I (i) confirm having read and understood the documents relating to the grant (i.e., the ESPP and the Agreement) which were provided in the English language, (ii) accept the terms of those documents accordingly, and (iii) agree not to challenge the validity of this document based on Law No. 24 of 2009 on National Flag, Language, Coat of Arms and National Anthem or the implementing Presidential Regulation.

Persetujuan Bahasa. Dengan mendaftar dan ikut serta dalam ESPP, saya (i) memberikan konfirmasi bahwa saya telah membaca dan memahami dokumen-dokumen berkaitan dengan pemberian ini (yaitu, ESPP dan Perjanjian) yang disediakan dalam Bahasa Inggris, (ii) menerima persyaratan di dalam dokumen-dokumen tersebut, dan (iii) setuju untuk tidak mengajukan keberatan atas keberlakuan dari dokumen ini berdasarkan Undang-Undang No. 24 Tahun 2009 tentang Bendera, Bahasa dan Lambang Negara serta Lagu Kebangsaan ataupun Peraturan Presiden sebagai pelaksanaannya.

Notifications

Exchange Control Information. Indonesian residents are obliged to provide the Indonesian central bank (Bank Indonesia) with information on foreign exchange activities. The reporting must be completed online through Bank Indonesia’s website, no later than the 15th day of the month following the month in which the foreign exchange activity took place.

In addition, if I remit funds into or out of Indonesia (e.g., proceeds from the sale of shares of Common Stock), the Indonesian Bank through which the transaction is made will submit a report of the transaction to the Bank of Indonesia for statistical reporting purposes. For transactions of US \$10,000 or more, a description of the transaction must be included in the report.

IRELAND

Terms and Conditions

Responsibility for Taxes. The following supplements Section 4 of the Global Subscription Agreement:

As a condition of my participation in the ESPP, I authorize the Company or the Employer to withhold Tax-Related Items arising in Ireland at the time I purchase shares of Common Stock under the ESPP, regardless of the fact that such withholding may not be required by law. I further acknowledge and agree that the Company or the Employer may accomplish such withholding by any one or a combination of the methods described in Section 4 of the Global Subscription Agreement. Notwithstanding this provision, I acknowledge and agree that, should the Company or the Employer fail to withhold Tax-Related Items for any or no reason, it remains my obligation to satisfy all Tax- Related Items and neither the Company nor the Employee will be liable for my failure to satisfy such obligations.

Notifications

Director Notification Obligation. Directors, shadow directors or secretaries of an Irish Subsidiary must notify the Irish Subsidiary in writing if they receive or dispose of an interest in the Company representing more than 1% of the Company's voting share capital (e.g., right to purchase shares of Common Stock under the ESPP, shares, etc.), if they become aware of the event giving rise to the notification requirement or if they become a director or secretary if such an interest exists at the time. This notification requirement also applies with respect to the interests of the spouse or children under the age of 18 of the director, shadow director or secretary (whose interests will be attributed to the director, shadow director or secretary).

ISRAEL

Terms and Conditions

Israeli Appendix. I acknowledge and agree that the offer of the ESPP is subject to the terms and conditions of the Appendix - Israeli Taxpayers to the ESPP, which has been provided or otherwise made available to me.

ITALY

Terms and Conditions

ESPP Document Acknowledgment. In participating in the ESPP, I acknowledge that I have received a copy of the ESPP and the Agreement and have reviewed the ESPP and the Agreement, including this Appendix, in their entirety and fully understand and accept all provisions of the ESPP and the Agreement. I further acknowledge that I have read and specifically and expressly approve the following sections of the Global Subscription Agreement:

Section 4 - Responsibility for Taxes; Section 5 - Nature of Grant; Section 7 - Governing Law; Section 8 - Language; Section 9 - Electronic Delivery and Acceptance; Section 10 - Severability; and the Data Privacy Provisions for Participants who reside in European Union / European Economic Area member states, Switzerland and the United Kingdom above in this Appendix.

JAPAN

There are no country-specific provisions.

KOREA

Terms and Conditions

Power of Attorney. If so requested by the Company or the Employer, I understand that I must print, sign and return a Power of Attorney in a form provided to me by the Company or the Employer to my local human resources representative in order to participate in the ESPP.

LUXEMBOURG

There are no country-specific provisions.

MALAYSIA

Terms and Conditions

Data Privacy. This provision replaces the Data Privacy Provisions for Participants who reside outside of European Union / European Economic Area member states, Switzerland and the United Kingdom above in this Appendix:

I consent to the collection, use and transfer, in electronic or other form, of my personal data as described in the Global Subscription Agreement and any other Plan grant materials by and among, as applicable, the Employer, the Company and any other Subsidiary or Affiliate or any third parties authorized by the same in assisting in the implementation, administration and management of my participation in the ESPP.

I may have previously provided the Company and the Employer with, and the Company and the Employer may hold, certain personal information about me, including, but not limited to, my name, home address, email address and telephone number; date of birth, social insurance number; passport or other identification number; salary;

Saya bersetuju dengan pengumpulan, penggunaan dan pemindahan, dalam bentuk elektronik atau lain-lain, data peribadi saya seperti yang dinyatakan dalam Perjanjian Langgan dan apa-apa bahan geran Pelan oleh dan di antara, sebagaimana yang berkenaan, Majikan, Syarikat dan mana-mana Anak Syarikat atau Syarikat Sekutu atau mana-mana pihak ketiga yang diberi kuasa oleh yang sama untuk membantu dalam pelaksanaan, pentadbiran dan pengurusan penyertaan saya dalam Pelan.

Sebelum ini, saya mungkin telah membekalkan Syarikat dan Majikan dengan, dan Syarikat dan Majikan mungkin memegang, maklumat peribadi tertentu tentang saya, termasuk, tetapi tidak terhad kepada, nama saya, alamat rumah, alamat emel dan nombor telefon, tarikh lahir, nombor insurans sosial, pasport atau nombor pengenalan lain, gaji, kewarganegaraan, jawatan, apa-apa syer atau

nationality, job title, any shares of stock or directorships held in the Company, the fact and conditions of my participation in the ESPP, details of all options or any other entitlement to shares awarded, cancelled, exercised, vested, unvested or outstanding in my favor ("Data"), for the exclusive purpose of implementing, administering and managing the ESPP.

I also authorize any transfer of Data, as may be required, to E*TRADE Financial Services, Inc. and its affiliates ("E*TRADE") or such designated broker which may be assisting the Company with the implementation, administration and management of the ESPP in the future and with whom any shares acquired upon exercise of the options are deposited. I acknowledge that these recipients may be located in my country or elsewhere, and that the recipient's country (e.g., the United States) may have different data privacy laws and protections to my country, which may not give the same level of protection to Data. I understand that I may request a list with the names and addresses of any potential recipients of Data by contacting my local human resources representative. I authorize the Company, E*TRADE and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing my participation in the ESPP to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing my participation in the ESPP. I understand that Data will be held only as long as is necessary to implement, administer and manage my participation in the ESPP. I understand that I may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case, without cost, by contacting in writing my local human resources representative, whose contact details are stockadmin@paloaltonetworks.com. Further, I understand that I am providing the consents herein on a purely voluntary basis. If I do not consent, or if I later seek to revoke my consent,

saham atau jawatan pengarah yang dipegang dalam Syarikat, fakta dan syarat-syarat penyertaan saya dalam Pelan, butir-butir semua opsi atau apa-apa hak lain untuk Syer yang dianugerahkan, dibatalkan, dilaksanakan, terletak hak, tidak terletak hak ataupun yang belum dijelaskan bagi faedah saya ("Data"), untuk tujuan eksklusif bagi melaksanakan, mentadbir dan menguruskan Pelan.

Saya juga memberi kuasa untuk membuat apa-apa pemindahan Data, sebagaimana yang diperlukan, kepada E*TRADE Financial Services dan syarikat sekutunya ("E*TRADE") atau broker yang ditetapkan yang mungkin membantu Syarikat dalam pelaksanaan, pentadbiran dan pengurusan Pelan pada masa depan dan dengan sesiapa yang didepositkan dengan Syer-syer yang diperolehi melalui pelaksanaan opsi. Saya mengakui bahawa penerima-penerima ini mungkin berada di negara saya atau di tempat lain, dan bahawa negara penerima (contohnya, Amerika Syarikat) mungkin mempunyai undang-undang privasi data dan perlindungan yang berbeza daripada negara saya, yang mungkin tidak memberi tahap perlindungan yang sama kepada Data. Saya faham bahawa saya boleh meminta senarai nama dan alamat mana-mana penerima Data yang berpotensi dengan menghubungi wakil sumber manusia tempatan saya. Saya memberi kuasa kepada Syarikat, E*Trade dan mana-mana penerima lain yang mungkin membantu Syarikat (masa sekarang atau pada masa depan) dengan melaksanakan, mentadbir dan menguruskan penyertaan saya dalam Pelan untuk menerima, memiliki, menggunakan, mengekalkan dan memindahkan Data, dalam bentuk elektronik atau lain-lain, semata-mata dengan tujuan tunggal untuk melaksanakan, mentadbir dan menguruskan penyertaan saya dalam Pelan. Saya faham bahawa Data akan dipegang hanya untuk tempoh yang diperlukan untuk melaksanakan, mentadbir dan menguruskan penyertaan saya dalam Pelan. Saya faham bahawa saya boleh, pada bila-bila masa, melihat Data, meminta maklumat tambahan mengenai penyimpanan dan pemrosesan Data, meminta apa-apa pindaan-pindaan dilaksanakan ke atas Data atau menolak atau menarik balik persetujuan dalam ini, dalam mana-mana kes, tanpa kos, dengan menghubungi stockadmin@paloaltonetworks.com. Selanjutnya, saya memahami bahawa saya memberikan persetujuan di sini secara sukarela. Jika saya tidak bersetuju, atau jika saya kemudian membatalkan persetujuan saya, status pekerjaan atau perkhidmatan saya dengan Majikan tidak akan terjejas; satu-satunya akibat jika saya tidak bersetuju atau menarik

<p><i>my employment status or service with the Employer will not be affected; the only consequence of refusing or withdrawing my consent is that the Company would not be able to grant future options or other equity awards to me or administer or maintain such awards. Therefore, I understand that refusing or withdrawing my consent may affect my ability to participate in the ESPP. For more information on the consequences of my refusal to consent or withdrawal of consent, I understand that I may contact my local human resources representative.</i></p>	<p><i>balik persetujuan saya adalah bahawa Syarikat tidak akan dapat memberikan opsyen pada masa depan atau anugerah ekuiti lain kepada saya atau mentadbir atau mengekalkan anugerah tersebut. Oleh itu, saya faham bahawa keengganan atau penarikan balik persetujuan saya boleh menjejaskan keupayaan saya untuk mengambil bahagian dalam Pelan. Untuk maklumat lanjut mengenai akibat keengganan saya untuk memberikan keizinan atau penarikan balik keizinan, saya fahami bahawa saya boleh menghubungi wakil sumber manusia tempatan saya.</i></p>
---	--

Notifications

Director Notification Obligation. Malaysian resident participants who are directors of a Malaysian Subsidiary or Affiliate are subject to certain notification requirements under the Malaysian Companies Act 2016. Among these requirements is an obligation to notify the Malaysian Subsidiary or Affiliate in writing when receiving or disposing of an interest (*e.g.*, purchase rights, shares, etc.) in the Company or any related company. This notification must be made within 14 days of receiving or disposing of any interest in the Company or any related company.

MEXICO

Terms and Conditions

Acknowledgement of the Agreement. By enrolling and participating in the ESPP, I acknowledge that I have received a copy of the ESPP and the Agreement, including this Appendix, which I have reviewed. I further acknowledge that I accept all the provisions of the ESPP and the Agreement, including this Appendix. I also acknowledge that I have read and specifically and expressly approves the terms and conditions set forth in Section 5 of the Global Subscription Agreement, which clearly provide as follows:

- (1) My participation in the ESPP does not constitute an acquired right;
- (2) The ESPP and my participation in it are offered by the Company on a wholly discretionary basis;
- (3) My participation in the ESPP is voluntary; and
- (4) The Company and any of its Parent and Subsidiaries are not responsible for any decrease in the value of any shares of Common Stock purchased under the ESPP.

Labor Law Policy and Acknowledgment. I expressly recognize that the Company, with registered offices at 3000 Tannery Way, Santa Clara, California 95054, USA, is solely responsible for the

administration of the ESPP and that my participation in the ESPP and purchase of shares of Common Stock does not constitute an employment relationship between myself and the Company since I am participating in the ESPP on a wholly commercial basis. Based on the foregoing, I expressly recognize that the ESPP and the benefits that I may derive from participation in the ESPP do not establish any rights between myself and the Employer and do not form part of the employment conditions and/or benefits provided by the Employer and any modification of the ESPP or its termination shall not constitute a change or impairment of the terms and conditions of my employment.

I further understand that my participation in the ESPP is as a result of a unilateral and discretionary decision of the Company, therefore, the Company reserves the absolute right to amend and/or discontinue my participation at any time without any liability to me.

Finally, I hereby declare that I do not reserve any action or right to bring any claim against the Company for any compensation or damages regarding any provision of the ESPP or the benefits derived under the ESPP, and I therefore grant a full and broad release to the Company, its branches, representation offices, shareholders, officers, agents or legal representatives and any Subsidiary or Affiliate with respect to any claim that may arise.

Reconocimiento del Convenio. *Al inscribirme y participar en el ESPP, reconozco que he recibido y revisado una copia del ESPP y del Convenio, incluyendo este Apéndice. De igual forma, reconozco y acepto todas las disposiciones del ESPP y del Convenio, incluyendo el apéndice. También reconozco que he leído y que apruebo de forma expresa todos los términos y condiciones establecidos en la sección 5 del Convenio de Suscripción Global, que claramente establece lo siguiente:*

- (1) *Mi participación en el ESPP no constituye un derecho adquirido;*
- (2) *El ESPP y mi participación en el mismo se ofrecen por la Compañía de forma totalmente discrecional;*
- (3) *Mi participación en el ESPP es voluntaria; y*
- (4) *La Compañía y sus Subsidiarias no son responsables por ninguna disminución en el valor de las acciones que pudiera adquirir bajo el ESPP.*

Política Laboral y Reconocimiento. *Reconozco expresamente que la Compañía, con sus oficinas registradas en 3000 Tannery Way, Santa Clara, California 95054, Estados Unidos, es el único responsable de la administración del ESPP y que mi participación en el mismo y la compra de Acciones no constituye de ninguna manera una relación laboral entre mi persona y la Compañía, dado que mi participación en el ESPP deriva únicamente de una relación comercial. Derivado de lo anterior, expresamente reconozco que el ESPP y los beneficios que pudieran derivar del mismo no establecen ningún derecho entre mi persona y el empleador y no forman parte de las condiciones laborales y/o prestaciones otorgadas por el empleador, y cualquier*

modificación al ESPP o la terminación del mismo no podrá ser interpretada como una modificación o degradación de los términos y condiciones de mi trabajo.

Asimismo, entiendo que mi participación en el ESPP es resultado de la decisión unilateral y discrecional de la Compañía, por lo tanto, la Compañía se reserva el derecho absoluto para modificar y/o terminar mi participación en cualquier momento, sin ninguna responsabilidad para mi persona.

Finalmente, manifiesto que no me reservo ninguna acción o derecho que origine una demanda en contra de la Compañía, por cualquier compensación o daño en relación con cualquier disposición del ESPP o de los beneficios derivados del mismo, y en consecuencia otorgo un amplio y total finiquito a la Compañía, sus sucursales, oficinas de representación, sus accionistas, directores, agentes y representantes legales o de cualquier Subsidiaria o Afiliada con respecto a cualquier demanda que pudiera surgir.

Notifications

Securities Law Information. The option to purchase shares of Common Stock and any shares of Common Stock acquired under the ESPP have not been registered with the National Register of Securities maintained by the Mexican National Banking and Securities Commission and cannot be offered or sold publicly in Mexico. In addition, the ESPP, the Agreement and any other document relating to the option to purchase shares of Common Stock may not be publicly distributed in Mexico. I acknowledge that these materials are addressed to me because of my existing relationship with the Company and these materials should not be reproduced or copied in any form. The offer contained in these materials does not constitute a public offering of securities, but rather constitutes a private placement of securities addressed specifically to Eligible Employees made in accordance with the provisions of the Mexican Securities Market Law, and any rights under such offering shall not be assigned or transferred.

NETHERLANDS

Notifications

Securities Law Information. The Company has prepared and made available an Information Document in reliance on an exemption from prospectus requirements that may otherwise apply to the offer of the ESPP in the Netherlands. The Information Document is attached hereto as Exhibit C.

NEW ZEALAND

Notifications

Securities Law Information. Warning: *I understand that I am being offered an opportunity to participate in the ESPP, which allows me to purchase shares of Common Stock under the ESPP in accordance with the terms of the ESPP and the Agreement. The shares of Common Stock, if*

purchased, give me a stake in the ownership of the Company. I may receive a return if dividends are paid.

If the Company runs into financial difficulties and is wound up, I will be paid only after all creditors and holders of preference shares have been paid. I may lose some or all of my investment.

New Zealand law normally requires people who offer financial products to give information to investors before they invest. This information is designed to help investors to make an informed decision.

The usual rules do not apply to this offer because it is made under an employee share purchase scheme. As a result, I may not be given all the information usually required. I will also have fewer other legal protections for this investment.

I understand that I should ask questions, read all documents carefully, and seek independent financial advice before committing myself.

The right to purchase shares of Common Stock under the ESPP is not quoted. The Common Stock is quoted and approved for trading on the Nasdaq Stock Market. This means that, if I purchase shares of Common Stock under the ESPP, I may be able to sell my investment on the Nasdaq Stock Market if there are interested buyers. I understand that I may get less than I invested. The price will depend on the demand for the Common Stock.

For information on risk factors impacting the Company's business that may affect the value of the shares of Common Stock, I should refer to the risk factors discussion in the Company's Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, which are filed with the U.S. Securities and Exchange Commission and are available online at www.sec.gov, as well as on the Company's website at <http://investors.paloaltonetworks.com/>.

NORWAY

There are no country-specific provisions.

POLAND

Terms and Conditions

Authorization for Payroll Deductions. I understand that as a condition of my participation in the ESPP, I will be required to execute the attached Consent for Deduction form. I understand that, by electronically accepting this Agreement, I am executing the attached Consent for Deduction form. I understand that I will not be able to participate in the ESPP until the Company receives my executed form.

Notifications

Exchange Control Information. Polish residents holding foreign securities (including shares of Common Stock) and maintaining accounts abroad must report information to the National Bank of Poland on transactions and balances of the securities and cash deposited in such accounts if the value of such transactions or balances exceeds PLN 7,000,000. If required, the reports must be filed on a quarterly basis on special forms available on the website of the National Bank of Poland. In addition, transfers of funds in excess of €15,000 into and out of Poland must be made via a bank account held at a bank in Poland. Polish residents are required to store all documents related to any foreign exchange transactions for a period of five years. I understand that I am responsible for complying with all applicable exchange control regulations.

(Consent for Deduction form on next page)

CONSENT FOR DEDUCTION

I acknowledge and agree that any past payroll deductions from my Compensation with respect to my participation in the Plan complied with Polish law and that I authorized all such deductions.

All the terms written in capital letters shall have the meanings given to them in the Plan.

In case of any discrepancies between the Polish language version of this document and its English language version, the Polish language version shall prevail.

ZGODA NA POTRĄCENIE

Niniejszym potwierdzam i zgadzam się z tym, że jakiegokolwiek przeszłe potrącenia z mojego wynagrodzenia dokonane w związku z moim uczestnictwem w Planie były zgodne z polskim prawem i że wyraziłem/am na nie zgodę.

Wszystkie terminy pisane wielkimi literami mają znaczenie przypisane im w ramach Planu.

W przypadku jakichkolwiek rozbieżności pomiędzy polską a angielską wersją językową niniejszego dokumentu, wersja polska ma charakter wiążący.

PORTUGAL

Terms and Conditions

Language Consent. I hereby agree to receive information related to the ESPP in English through my participation in the ESPP. Specifically, I acknowledge as follows:

I hereby expressly declare that I have full knowledge of the English language and have read, understood and fully accepted and agreed with the terms and conditions established in the ESPP and the Agreement.

Por meio do presente, eu declaro expressamente que tem pleno conhecimento da língua inglesa e que li, compreendi e livremente aceitei e concordei com os termos e condições estabelecidas no Plano e no Acordo.

Notifications

Exchange Control Information. If I hold shares of Common Stock acquired under the ESPP, the acquisition of shares should be reported to the Banco de Portugal for statistical purposes. If the shares are deposited with a commercial bank or financial intermediary in Portugal, such bank or financial intermediary will submit the report on my behalf. If the shares are not deposited with a commercial bank or financial intermediary in Portugal, I am responsible for submitting the report to the Banco de Portugal.

QATAR

Notifications

Securities Law Information. The options granted under the ESPP and any shares of Common Stock issued under the ESPP have not been offered, sold or delivered and will not be offered, sold or delivered, at any time, directly or indirectly in the State of Qatar in a manner that would constitute a public offering.

The Agreement, the ESPP and any other incidental communication materials distributed in connection with the ESPP have not been, and will not be, registered with or approved by the Qatar Financial Markets Authority or Qatar Central Bank and may not be publicly distributed. The Agreement, the ESPP and any other incidental communication materials distributed in connection with the ESPP are intended only for Eligible Employees and must not be provided to any other person. These materials are not for general circulation in the State of Qatar and may not be reproduced or used for any other purpose.

ROMANIA

Terms and Conditions

Language Consent. By participating in the ESPP, I acknowledge that I am proficient in reading and understanding English and fully understand the terms of the documents related to my participation (the ESPP and the Agreement), which were provided in the English language. I accept the terms of those documents accordingly.

Consimtament cu privire la limba. Prin participarea la planul ESPP, confirm ca am un nivel adecvat de cunoastere in ce priveste citirea si intelegerea limbii engleze, am inteles pe deplin termenii documentelor referitoare la participarea mea (planul ESPP si Formularul de aderare/schimbare, inclusiv aceasta Anexa), care au fost furnizate in limba engleza. Accept termenii acestor documente in mod corespunzator.

Notifications

Exchange Control Information. If I deposit the proceeds from the sale of shares of Common Stock acquired under the ESPP into a bank account in Romania, I may be required to provide the Romanian bank with appropriate documentation explaining the source of the funds. I understand that I should consult with my personal legal advisor to determine whether I will be required to submit such documentation to the Romanian bank.

RUSSIA

Terms and Conditions

Authorization for ESPP Participation. I agree to act in accordance with any procedures established by the Company to comply with the exchange control regulations in Russia and to provide a power of attorney (if I have not already done so) or any other agreements or consents that may be required by the Company to facilitate my participation in the ESPP. I understand that if I fail to comply with required procedures or to execute a power of attorney or any other required agreement or consent, I will not be able to participate in the ESPP.

U.S. Transaction. I understand that acceptance of the Agreement results in a contract between me and the Company completed in the United States and that the Agreement is governed by the laws of the State of California, without giving effect to the conflict of law principles thereof. I understand that, upon purchase of shares of Common Stock under the ESPP, any such shares of Common Stock shall be held in the United States and in no event will such shares of Common Stock be delivered to me in Russia. I acknowledge that I am not permitted to sell or otherwise transfer shares of Common Stock directly to other individuals in Russia, nor am I permitted to bring any certificates representing the shares of Common Stock into Russia (if such certificates are actually issued).

Data Privacy. I hereby acknowledge that I have read and understand the terms regarding collection, processing and transfer of Data contained in the Data Privacy Provisions above in this

Appendix and, by enrolling and participating in the ESPP, I agree to such terms. In this regard, upon request of the Company or the Employer, I agree to provide any executed data privacy consent form (or any other agreements or consents that may be required by the Employer or the Company) should the Company and/or the Employer deem such agreement or consent necessary under applicable data privacy laws, either now or in the future. I understand I will not be able to participate in the ESPP if I fail to execute any such consent or agreement.

Notifications

Securities Law Information. The option to purchase shares of Common Stock, the Agreement, the ESPP and all other materials I may receive regarding my participation in the ESPP do not constitute advertising or an offering of securities in Russia. The issuance of shares of Common Stock under the ESPP has not and will not be registered in Russia and, therefore, the shares of Common Stock purchased by me under the ESPP may not be offered or placed in public circulation in Russia.

Exchange Control Information. I understand that I am responsible for complying with any and all Russian foreign exchange requirements in connection with the ESPP, any shares of Common Stock acquired under the ESPP and funds remitted into Russia in connection with ESPP. This may include, in certain circumstances, reporting and repatriation requirements. Because the exchange control regulations change frequently and without notice, I should consult with a legal advisor to ensure compliance with any exchange control regulations applicable to any aspect of my participation in the ESPP.

Foreign Asset/Account Reporting Information. Russian residents are required to report the opening, closing or change in account details of any foreign bank account to the Russian tax authorities within one month of the opening, closing or change of such account. Russian residents also are required to report to the Russian tax authorities on or before June 1 of the following year (i) the beginning and ending balances in a foreign bank account each year and (ii) transactions related to such a foreign account during the year. Foreign brokerage accounts and foreign accounts with other financial institutions (financial market organizations) also must be reported. Certain specific exceptions from the reporting requirements may apply. Non-compliance with these reporting obligations could impact my ability to receive shares of Common Stock and participate in the ESPP. I should consult with my personal legal advisor to determine how these reporting requirements apply to any account opened in connection with my participation in the ESPP.

Anti-Corruption Information. Anti-corruption laws prohibit certain public servants, their spouses and their dependent children from owning any foreign source financial instruments (*e.g.*, shares of Common Stock of foreign companies such as the Company). I understand that I should inform the Company if I am covered by these laws because I should not hold shares of Common Stock under the ESPP.

SAUDI ARABIA

Terms and Conditions

Purchase of Shares. I understand that no shares of Common Stock will be purchased on my behalf under the ESPP, provided the Company, in its sole discretion, determines that such purchase does not comply with securities law requirements in Saudi Arabia.

Notifications

Securities Law Information. The Agreement and related ESPP plan document may not be distributed in Saudi Arabia except to such persons as are permitted under the Offers of Securities and Continuous Obligations issued by the Capital Market Authority.

The Capital Market Authority does not make any representation as to the accuracy or completeness of the Agreement, and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of the Agreement. I should conduct my own due diligence on the accuracy of the information relating to the shares of Common Stock. If I do not understand the contents of the Agreement, I should consult an authorized financial advisor.

SINGAPORE

Terms and Conditions

Restriction on Sale and Transferability of Shares. I understand and acknowledge that my option to purchase shares of Common Stock is subject to section 257 of the Singapore Securities and Futures Act (Chapter 289, 2006 Ed.) (“SFA”) and I will not be able to make any subsequent sale of shares of Common Stock in Singapore, or any offer of the shares of Common Stock acquired under the ESPP unless such sale or offer in Singapore is made (i) more than six months from the date of offer, (ii) pursuant to the exemptions under Part XIII Division (1) Subdivision (4) (other than section 280) of the SFA, or (iii) pursuant to, and in accordance with the condition of, any other applicable provisions of the SFA.

Notifications

Securities Law Information. I understand that the option to purchase shares of Common Stock under the ESPP is being granted to me pursuant to the “Qualifying Person” exemption under section 273(1)(f) of the SFA. I further understand that the ESPP has not been lodged or registered as a prospectus with the Monetary Authority of Singapore.

Director Reporting Notice. If I am a director, associate director or shadow director of a Singapore Subsidiary or Affiliate, as such terms are used in the Singapore Companies Act (the “SCA”), I agree to comply with notification requirements under the SCA. Among these requirements is an obligation to notify the Singapore Subsidiary or Affiliate in writing when I receive an interest (*e.g.*, shares of Common Stock) in the Company or any related companies (including when I sell shares acquired under the ESPP). In addition, I must notify the Singapore

Subsidiary or Affiliate when I sell or receive shares of the Company or any related company (including when I sell or receive shares under the ESPP). These notifications must be made within two business days of acquiring or disposing of any interest in the Company or any related company. In addition, I acknowledge that a notification must be made of my interests in the Company or any related company within two business days of becoming a director.

SLOVAKIA

There are no country-specific provisions.

SLOVENIA

Terms and Conditions

Language Consent. By enrolling in the ESPP, I acknowledge that I am proficient in reading and understanding English and fully understand the terms of the documents related to the grant (the Agreement and the ESPP), which were provided in the English language. I accept the terms of those documents accordingly.

Soglasje za uporabo angleškega jezika. Z vpisom v ESPP (plan) priznavam in potrjujem, da sem sposoben brati in razumeti angleški jezik ter v celoti razumem pogoje dokumentov, povezanih z dodelitvijo (pogodba (Agreement) in ESPP (plan)), ki so bili posredovani v angleškem jeziku. Skladno s tem sprejemam pogoje teh dokumentov.

SOUTH AFRICA

Terms and Conditions

Responsibility for Taxes. The following provision supplements Section 4 of the Global Subscription Agreement:

By enrolling and participating in the ESPP, I agree that, immediately upon the purchase of shares of Common Stock, I will notify the Employer of the amount of any discount/gain realized. I understand that if I fail to advise the Employer of the gain realized upon purchase, I may be liable for a fine. I acknowledge that I am solely responsible for paying any difference between the actual tax liability and the amount withheld.

Tax Clearance Certificate for ESPP Participation. I understand that in order to participate in the ESPP, I may be required to obtain and provide to the Employer, or any third party designated by the Employer or the Company, a Tax Clearance Certificate (with respect to foreign investments – see Exchange Control Information below) bearing the official stamp and signature of the Exchange Control Department of the South African Revenue Service (“SARS”) and I must renew this Tax Clearance Certificate each year or such other period as may be required by the SARS. I acknowledge that my failure to provide a valid Tax Clearance Certificate by the deadline provided by the Employer or the Company may result in my withdrawal from participation in the ESPP.

Notifications

Securities Law Information. The documents listed below are available for my review on the Company's website at <https://investors.paloaltonetworks.com> and the Company's intranet:

1. The Company's most recent annual financial statements; and
2. The Company's most recent ESPP prospectus.

A copy of the above documents will be sent to me free of charge on written request to stockadmin@paloaltonetworks.com.

I should carefully read the materials provided before making a decision whether to participate in the ESPP. In addition, I should contact my tax advisor for specific information concerning my personal tax situation with regard to ESPP participation.

Exchange Control Information. Under current South African exchange control policy, South African residents may invest a maximum of ZAR 11 million per annum in offshore investments, including in shares of Common Stock. The ZAR 11 million allowance consists of a ZAR 1 million annual discretionary allowance which may be utilized for investment and non-investment purposes and without prior authorization, and a ZAR 10 million annual allowance which may be utilized solely for investment purposes and requires a tax clearance certificate. These limits do not apply to non-resident Participants.

It is my responsibility to ensure that I do not exceed the combined limit. This limit is a cumulative allowance; therefore, my ability to remit funds for the purchase of Common Stock will be reduced if my foreign investment limit is utilized to make a transfer of funds offshore that is unrelated to the ESPP. If the ZAR 11 million limit will be exceeded as a result of a purchase under the ESPP, I may still participate in the ESPP; however, I will need to immediately sell the shares of Common Stock purchased on my behalf under the ESPP and repatriate the proceeds to South Africa in order to ensure that I do not hold assets outside South Africa with a value in excess of the permitted offshore investment allowance amount.

As the investment limit and other exchange control requirements are subject to change without notice, I should consult my personal legal advisor prior to the purchase or sale of shares of Common Stock under the ESPP to ensure compliance with current regulations. I am solely responsible for complying with exchange control requirements in South Africa and neither the Company nor any Subsidiary or Affiliate will be liable for any fines or penalties resulting from my failure to do so.

SPAIN

Terms and Conditions

Nature of Grant. This provision supplements Section 5 of the Global Subscription Agreement:

By enrolling in the ESPP, I consent to participation in the ESPP and acknowledge that I have received a copy of the ESPP.

I understand and agree that I will cease to be a Participant in the ESPP upon the termination of my status as an Eligible Employee for any reason (including for the reasons listed below) and my payroll deductions shall cease and be returned to me, without interest, as soon as administratively possible.

In particular, I understand and agree that I will no longer be able to participate in the ESPP and any right to the shares of Common Stock will be forfeited upon the termination of my status as an Eligible Employee due to, but not limited to: resignation, retirement, disciplinary dismissal adjudged to be with cause, disciplinary dismissal adjudged or recognized to be without cause, individual or collective layoff on objective grounds, whether adjudged to be with cause or adjudged or recognized to be without cause, material modification of the terms of employment under Article 41 of the Workers' Statute, relocation under Article 40 of the Workers' Statute, Article 50 of the Workers' Statute, unilateral withdrawal by the Employer, and under Article 10.3 of Royal Decree 1382/1985.

Furthermore, I understand that the Company has unilaterally, gratuitously and discretionally decided to grant options to purchase shares of Common Stock under the ESPP to individuals who may be Eligible Employees. The decision is a limited decision that is entered into upon the express assumption and condition that any grant will not economically or otherwise bind the Company or any Subsidiary or Affiliate on an ongoing basis. Consequently, I understand that the option to purchase shares of Common Stock is granted on the assumption and condition that the option and any shares of Common Stock purchased under the ESPP are not part of any employment contract either with the Company or any Subsidiary or Affiliate and shall not be considered a mandatory benefit, salary for any purposes (including severance compensation) or any other right whatsoever. In addition, I understand that the option to purchase shares of Common Stock would not be granted to me but for the assumptions and conditions referred to herein; thus, I acknowledge and freely accept that should any or all of the assumptions be mistaken or should any of the conditions not be met for any reason, then the grant of the option to purchase shares of Common Stock shall be null and void.

Notifications

Securities Law Information. No "offer of securities to the public," as defined under Spanish law, has taken place or will take place in the Spanish territory in connection with the ESPP or the shares of Common Stock acquired pursuant thereto. The Agreement (including this Appendix) has not been nor will it be registered with the *Comisión Nacional del Mercado de Valores*, and does not constitute a public offering prospectus.

Exchange Control Information. When receiving foreign currency payments exceeding €50,000 derived from the ownership of any shares of Common Stock (*i.e.*, dividends or sale proceeds), I acknowledge that I must inform the financial institution receiving the payment of the basis upon

which such payment is made. I will need to provide the institution with the following information:

(i) my name, address, and tax identification number; (ii) the name and corporate domicile of the Company; (iii) the amount of the payment and the currency used; (iv) the country of origin; (v) the reasons for the payment; and (vi) further information that may be required.

Further, I am required to declare electronically to the Bank of Spain any securities accounts (including brokerage accounts held abroad), as well as the shares held in such accounts, and any transactions carried out with non-residents, if the value of the transactions for all such accounts during the prior tax year or the balances in such accounts as of December 31 of the prior tax year exceed €1,000,000.

SWEDEN

Responsibility for Taxes: The following provisions supplement Section 4 of the Global Subscription Agreement:

Without limiting the Company and the Employer's authority to satisfy their withholding obligations for Tax-Related Items as set forth in Section 4 of the Global Subscription Agreement, by participating in the ESPP, I authorize the Company and/or the Employer to withhold or to sell shares of Common Stock otherwise deliverable to me upon purchase in order to satisfy Tax-Related Items, regardless of whether the Company and/or the Employer has an obligation to withhold such Tax- Related Items.

SWITZERLAND

Notifications

Securities Law Information. Neither this document nor any other materials relating to participation in the ESPP (i) constitutes a prospectus according to articles 35 et seq. of the Swiss Federal Act on Financial Services ("FinSA"), (ii) may be publicly distributed or otherwise made publicly available in Switzerland to any person other than an Eligible Employee, or (iii) has been or will be filed with, approved or supervised by any Swiss reviewing body according to article 51 FinSA or any Swiss regulatory authority, including the Swiss Financial Market Supervisory Authority.

TAIWAN

Terms and Conditions

Data Privacy. I hereby acknowledge that I have read and understand the terms regarding the collection, processing and transfer of Data contained in the Data Privacy Provisions above in this Appendix and, by enrolling and participating in the ESPP, I agree to such terms. In this regard, upon request of the Company or the Employer, I agree to provide any executed data privacy consent form (or any other agreements or consents that may be required by the Employer or the Company) should the Company and/or the Employer deem such agreement or consent necessary

under applicable data privacy laws, either now or in the future. I understand I will not be able to participate in the ESPP if I fail to execute any such consent or agreement.

Notifications

Securities Law Information. The offer to participate in the ESPP and the shares of Common Stock to be purchased under the ESPP are available only for Eligible Employees. It is not a public offer of securities by a Taiwanese company. Therefore, it is exempt from registration in Taiwan.

Exchange Control Information. I may acquire and remit foreign currency (including proceeds from the sale of shares of Common Stock and the receipt of any dividends paid on such shares) into and out of Taiwan up to US\$5,000,000 per year. If the transaction amount is TWD500,000 or more in a single transaction, I must submit a Foreign Exchange Transaction Form and also provide supporting documentation to the satisfaction of the remitting bank.

THAILAND

Terms and Conditions

Authorization for Participation in the ESPP. I hereby authorize the Employer, the Company and any Subsidiary or Affiliate to remit my accumulated payroll deductions under the ESPP, on my behalf, to the United States of America, to purchase shares of Common Stock under the ESPP.

Upon request of the Company or the Employer, I agree to execute a power of attorney and any other agreements or consents that may be required to enable the Employer, the Company or any Subsidiary or Affiliate or any third party designated by the Employer or the Company to remit my accumulated payroll deductions from Thailand for the purchase of shares of Common Stock. I understand that if I fail to execute a power of attorney or any other form of agreement or consent that is required for the remittance of my payroll deductions, I will not be able to participate in the ESPP.

Notifications

Exchange Control Information. I acknowledge that I am required to immediately repatriate the proceeds from the sale of shares of Common Stock to Thailand if the funds received in a single transaction are US \$1,000,000 or more, unless I can rely on an applicable exemption (e.g., where the funds will be used offshore for any permissible purposes under exchange control regulations and the relevant form and supporting documents have been submitted to a commercial bank in Thailand). Any foreign currency repatriated to Thailand must either be converted to Thai Baht or deposited into a foreign currency deposit account within 360 days of repatriation. I must specifically report the inward remittance to the Bank of Thailand on a foreign exchange transaction form. If I fail to comply with these obligations, I may be subject to penalties assessed by the Bank of Thailand. I acknowledge that I should consult my personal legal advisor prior to

taking any action with respect to remittance of proceeds from the sale of shares of Common Stock into Thailand. I am responsible for ensuring compliance with all exchange control laws in Thailand.

TURKEY

Notifications

Securities Law Information. By electing to participate in the ESPP, I understand and agree that I am not permitted to sell any shares of Common Stock acquired under the ESPP in Turkey. The shares of Common Stock are currently traded on the Nasdaq Stock Market, which is located outside of Turkey, under the ticker symbol “PANW” and the shares may be sold through this exchange.

Financial Intermediary Information. Activity by Turkish residents related to investments in foreign securities (*e.g.*, the sale of shares of Common Stock under the ESPP) must be conducted through a bank or financial intermediary institution licensed by the Turkish Capital Markets Board and should be reported to the Turkish Capital Markets Board. I understand that I am solely responsible for complying with this requirement and I should contact my personal legal advisor for further information regarding my obligations in this respect.

UNITED ARAB EMIRATES

Terms and Conditions

Nature of Grant. The following provision supplements Section 5 of the Global Subscription Agreement:

I acknowledge that the ESPP and related benefits do not constitute a component of my “wages” for any legal purpose. Therefore, the ESPP and related benefits will not be included and/or considered for purposes of calculating any and all labor benefits, such as social insurance contributions and/or any other labor-related amounts which will be payable.

Notifications

Securities Law Information. Participation in the ESPP is being offered only to selected employees and is in the nature of providing equity incentives to Eligible Employees in the United Arab Emirates. The ESPP and the Agreement are intended for distribution only to such employees and must not be delivered to, or relied on by, any other person. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If I do not understand the contents of the ESPP or the Agreement, I understand that I should consult an authorized financial adviser. The Emirates Securities and Commodities Authority has no responsibility for reviewing or verifying any documents in connection with the ESPP, and neither the Ministry of Economy nor the Dubai Department of Economic Development have approved the ESPP or the Agreement nor taken any steps to verify the information set out therein and have no responsibility for such documents.

UNITED KINGDOM

Terms and Conditions

Joint Election. As a condition of my participation in the ESPP, I agree to accept any liability for secondary Class 1 NICs (“Employer NICs”) and, to the extent permissible, the employer portion of the Health and Social Care levy, which may be payable by the Company or the Employer with respect to the purchase of the shares of Common Stock or otherwise payable in connection with my participation in the ESPP. Without prejudice to the foregoing, I agree to enter into the joint election with the Company and/or the Employer attached hereto as Exhibit D (the “Election”), the form of such Election being formally approved by HM Revenue and Customs (“HMRC”), and any other consent or elections required to accomplish the transfer of the Employer NICs to me. I further agree to execute such other joint elections as may be required between me and any successor to the Company and/or the Employer. I agree to enter into an Election prior to any event giving rise to Employer NICs. I further agree that the Company and/or the Employer may collect the Employer NICs by any of the means set forth in Section 4 of the Global Subscription Agreement.

If I do not enter into an Election prior to the purchase of shares of Common Stock, I will not be entitled to purchase shares unless and until I enter into an Election, without any liability to the Company, the Employer or any other Subsidiary or Affiliate.

Responsibility for Taxes. The following supplements Section 4 of the Global Subscription Agreement:

Without limitation to Section 4 of the Global Subscription Agreement, I agree that I am liable for all Tax-Related Items and hereby covenant to pay all such Tax-Related Items as and when requested by the Company or the Employer or by HMRC (or any other tax authority or any other relevant authority). I also agree to indemnify and keep indemnified the Company and the Employer against any Tax-Related Items that they are required to pay or withhold or have paid or will pay to HMRC (or any other tax authority or any other relevant authority) on my behalf.

Notwithstanding the foregoing, if I am a director or executive officer of the Company (within the meaning of Section 13(k) of the Exchange Act), I may not be able to indemnify the Company or the Employer for the amount of any income tax not collected from or paid by me, as it may be considered a loan. In this case, the amount of any income tax not collected within 90 days of the end of the U.K. tax year in which the event giving rise to the Tax-Related Items occurs may constitute an additional benefit to me on which additional income tax and NICs may be payable. I understand that I will be responsible for reporting and paying any income tax due on this additional benefit directly to HMRC under the self-assessment regime and for paying the Company and/or Employer for the value of any employee NICs due on this additional benefit, which may be collected from me by the Company or the Employer by any of the means referred to in Section 4 of the Global Subscription Agreement.

Notifications

Securities Law Information. The Company has prepared and made available an Information Document in reliance on an exemption from prospectus requirements that may otherwise apply to the offer of the ESPP in the United Kingdom. The Information Document is attached hereto as Exhibit C.

EXHIBIT C

2012 Employee Stock Purchase Plan Information Document Important Information for Eligible Employees in the European Union (EU) / European Economic Area (EEA) and the United Kingdom

Introduction

Palo Alto Networks, Inc. (the "**Company**" or the "**Issuer**") offers to its non-U.S. eligible employees (including employees in the EU/EEA and the United Kingdom) the opportunity to purchase shares of common stock, par value USD \$0.0001 (the "**Shares**"), under the 2012 Employee Stock Purchase Plan, as amended and restated (the "**Plan**"), at a discounted purchase price through contributions that are made by payroll deductions. This information document provides information about the number and nature of the securities and the reasons for and details of the offer or allotment. To that end, this information document describes the Issuer, the Plan, the grant of purchase rights under the Plan and the Shares to be purchased.

Exemption from the EU Prospectus Regulation

To the extent offers of shares under the Plan are offers of securities to the public in the EU/EEA and the United Kingdom, the Issuer can claim an exemption from the obligation to publish a prospectus which meets the requirements set forth in Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 (the "**Prospectus Regulation**") and the United Kingdom Prospectus Regulation Rules ("**PRR**"), respectively. Article 1(4)(i) of the Prospectus Regulation and Rule 1.2.3(4)(i) of the PRR exempt issuers from the obligation to publish a prospectus if the securities are offered to existing or former directors or employees by their employer or by an affiliated undertaking provided that the present document is made available to the eligible employees (the "**Exemption**"). The Exemption has been incorporated into United Kingdom domestic law in Rule 1.2.3 of the United Kingdom Prospectus Rules contained in the Financial Conduct Authority's Handbook. Accordingly, in reliance on the Exemption, for offers under the Plan made after this information document is made available to eligible employees, the Issuer has not prepared or filed a prospectus with any competent regulatory authority in the EU/EEA or the United Kingdom in relation to offers made under the Plan, and no such prospectus has been approved and/or published in the EU/EEA or the United Kingdom.

This document does not constitute a prospectus. Instead, this document contains the information that the Company must make available to employees in the EU/EEA and the United Kingdom in order to comply with the Exemption.

Information about the Issuer

The Issuer is Palo Alto Networks, Inc., a U.S. publicly-traded corporation which has listed its Shares on the Nasdaq stock exchange ("**Nasdaq**") under the ticker symbol "PANW." The International Securities Identification Number (the "**ISIN**") for the Shares is US6974351057. The U.S. security identification number (the "**CUSIP number**") for the Shares is 697435105.

The Issuer's address is 3000 Tannery Way, Santa Clara, California 95054, U.S.A.

Additional information about the Issuer, as well as the current trading price of the Shares and the total number of Shares that are issued and outstanding, can be found on its website at <https://investors.paloaltonetworks.com>. Filings made by the Company with the U.S. Securities and Exchange

Commission ("**SEC**") are available on its website at www.sec.gov. You also can access these filings through the Investor Relations section of the Company's website, or you can request copies of the filings by contacting the Company's Investor Relations Department at:

Palo Alto Networks, Inc.
3000 Tannery Way, Santa Clara, California 95054, U.S.A. <https://investors.paloaltonetworks.com>
(408) 753-4000

Reasons for the Offer

The purpose of the Plan is to provide eligible employees of the Company and subsidiaries or affiliates of the Company that have been designated by the Administrator (as defined below) as eligible to participate in the Plan ("**Designated Companies**") with an opportunity to purchase Shares through accumulated contributions. The Company intends for the Plan to have two components: a component that is intended to qualify as an "employee stock purchase plan" under Section 423 of the U.S. Internal Revenue Code of 1986 (the "**423 Component**") and a component that is not intended to qualify as such (the "**Non-423 Component**").

Details of the Offer

Administration

The Plan is offered on a wholly discretionary basis. The Plan is administered by the Company's Board of Directors ("**Board**"), or a committee appointed by the Board (the "**Administrator**"). The Administrator will have full and exclusive discretionary authority to construe, interpret and apply the terms of the Plan, to designate separate offerings under the Plan, to designate subsidiaries and affiliates of the Company as participating in the 423 Component or Non-423 Component, to determine eligibility, to adjudicate all disputed claims filed under the Plan and to establish such procedures that it deems necessary for the administration of the Plan.

Eligibility

Generally, all individuals who are common law employees of the Company or a Designated Company and are customarily employed for at least twenty hours per week and more than five months in any calendar year are eligible to participate in the Plan. However, the Administrator also may determine (subject to the terms of the Plan) that certain individuals will or will not be eligible to participate in the Plan if they have not completed at least two years of service since their last hire date (or such lesser period of time as may be determined by the Administrator in its discretion), or they customarily work no more than twenty hours per week or five months per calendar year (or such lesser period of time as may be determined by the Administrator in its discretion) as required under applicable local law.

Time Frame of the Offer and Enrollment

Each "**Offering Period**" under the Plan is approximately twenty-four months in duration, commencing on the first trading day on or after February 28 and August 31 of each year and ending on the first trading day on or after February 28 and August 31, approximately twenty-four months later. Each Offering Period consists of four six-month "**Purchase Periods**" during which your payroll deductions or other contributions are accumulated under the Plan.

If you are eligible to participate in the Plan, you may become a participant by submitting to the Company's stock administration office (or its designee), on or before a date determined by the Administrator prior to the applicable enrollment date for the Offering Period, a properly completed subscription agreement authorizing

Contributions (as defined below) in the form provided by the Administrator for such purpose, or following an electronic or other enrollment procedure determined by the Administrator.

Once you become a participant in the Plan, you will automatically participate in each succeeding Offering Period unless you either withdraw from the Plan or you cease to be an eligible employee. You are not required to complete any additional subscription agreement, form or procedure in order to continue participation in the Plan, unless requested by the Administrator for legal or administrative reasons.

Minimum and Maximum Amount of Contributions

You may contribute through contributions (in the form of payroll deductions or otherwise, to the extent permitted by the Administrator) (“**Contributions**”) an amount not exceeding fifteen percent (15%) of your eligible Compensation (as defined below) toward the purchase of Shares under the Plan, subject to the terms of the Plan. The payroll deductions will commence on the first payday following the first trading day of the Offering Period and will continue until the first trading day on or after February 28 and August 31 of each Purchase Period (the “**Exercise Date**”) unless sooner altered or terminated as provided in the Plan. Contributions may be made in whole percentages only.

For purposes of the Plan, your “**Compensation**” includes base straight time gross earnings, payments for overtime and shift premium, but excludes payments for commissions, incentive compensation, bonuses and other similar compensation. The Administrator, in its discretion, may, on a uniform and nondiscriminatory basis, establish a different definition of Compensation for a subsequent Offering Period.

Unless otherwise determined by the Administrator, during a Purchase Period, you may not increase the rate of your Contributions and may only decrease the rate of your Contributions one time per Purchase Period. Any such decrease during a Purchase Period requires you to properly complete and submit to the Company’s stock administration office (or another Company designee), on or before a date determined by the Administrator prior to an applicable Exercise Date, a new subscription agreement authorizing the change in Contribution rate or follow an electronic or other procedure prescribed by the Administrator.

Details of the Price

The purchase price is eighty-five percent (85%) of (i) the fair market value of the Shares on the first trading day of the Offering Period or (ii) the fair market value of the Shares on the applicable Exercise Date, whichever is lower. The fair market value is generally the closing price of a Share on the Nasdaq on the Exercise Date.

Nature of the Offer

On each Exercise Date, so long as the Plan remains in effect and provided that you have not withdrawn from the Offering Period in accordance with the requirements of the Plan, the Company shall apply the funds then in your account to the purchase of whole Shares. Any Contributions accumulated in your account which are not sufficient to purchase a full Share will be promptly refunded to you promptly following an Exercise Date.

Number and Nature of the Securities Offered

The maximum number of Shares initially reserved for issuance under the Plan was 1,000,000 Shares. However, the number of Shares available for issuance under the Plan is increased on an annual basis in accordance with the terms of the Plan.

Delivery

As soon as reasonably practicable after each Exercise Date, the Company will arrange the delivery to each participant of the Shares purchased upon exercise of his or her purchase right in a form determined by the Administrator (in its sole discretion) and pursuant to rules established by the Administrator. The Company may permit or require that Shares be deposited directly with a broker designated by the Company or to a designated agent of the Company, and the Company may utilize electronic or automated methods of share transfer. The Company may require that Shares be retained with such broker or agent for a designated period of time and/or may establish other procedures to permit tracking of dispositions of such Shares.

Commission

The Company has selected a broker to administer the issuance of Shares under the Plan (currently E*TRADE Corporate Financial Services, Inc.) (the "**Broker**"). At the time of enrollment, you were or will be asked to open an account with the Broker. You will not have to pay a fee for opening an account with the Broker for the management of your account or for the purchase of Shares. You are responsible for all the commissions and fees related to any sale or transfer of the Shares from the account with the Broker. In addition, the SEC applies a fee to most securities transactions at a rate determined by the SEC. Such commissions and fees are subject to change at any time.

Termination of Participation in the Plan

You may withdraw from the Plan at least one (1) business day prior to an Exercise Date by submitting to the Company's stock administration office (or its designee) a written notice of withdrawal in the form determined by the Administrator for such purpose, or following an electronic or other withdrawal procedure determined by the Administrator. Upon withdrawal from the Plan, all of your accumulated payroll deductions will be returned to you, without interest (unless otherwise required by applicable law), promptly after receipt of notice of withdrawal, and your purchase right for the Offering Period will be automatically terminated, and no further Contributions for the purchase of Shares will be made for such Offering Period..

If you voluntarily withdraw from the Plan, you may not resume participation in the Plan during the same Offering Period. However, you may participate in any Offering Period under the Plan which begins on a date after such withdrawal by completing a subscription agreement in the same manner as described in the Plan for initial participation in the Plan.

Termination of Employment

If you cease to be an eligible employee, for any reason, you will be deemed to have elected to withdraw from the Plan and the Contributions credited to your account during the Offering Period but not yet used to purchase Shares under the Plan will be returned to you without interest (unless otherwise required by applicable law), and your purchase right will be automatically terminated.

Non-transferability of Purchase Rights

Neither Contributions credited to your account nor any rights with regard to the exercise of a purchase right or to receive Shares under the Plan may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will or the laws of descent and distribution). Any such attempt at assignment, transfer, pledge or other disposition will be without effect, except that the Company may treat such act as an election to withdraw funds from an Offering Period in accordance with the Plan.

Restriction on Shares and Transferability

The Shares in this offering under the Plan are registered on a registration statement on Form S-8 with the SEC and are generally freely transferable (subject however to any transferability restrictions resulting from applicable insider trading laws and the Company's insider trading policy).

The Plan is intended to provide Shares for investment and not for resale. The Company does not, however, intend to restrict or influence any participant in the conduct of his or her own affairs. Therefore, you may sell Shares purchased under the Plan at any time you choose, subject to compliance with any applicable securities laws. You assume the risk of any market or currency fluctuations in the price of the Shares. Moreover, you should be aware of the risks of investing in Shares as described, in particular, in the "Risk Factors" section of certain of the Company's SEC filings.

Termination, Suspension, or Amendment of the Plan

The Administrator, in its sole discretion, may amend, suspend, or terminate the Plan, or any part thereof, at any time and for any reason. If the Plan is terminated, the Administrator, in its discretion, may elect to terminate all outstanding Offering Periods either immediately or upon completion of the purchase of Shares on the next Exercise Date (which may be sooner than originally scheduled, if determined by the Administrator in its discretion), or may elect to permit Offering Periods to expire in accordance with their terms (and subject to any adjustment pursuant to the Plan).

If the Offering Periods are terminated prior to expiration, all amounts then credited to participants' accounts that have not been used to purchase Shares will be returned to participants without interest (unless otherwise required by applicable laws) as soon as administratively practicable.

Information on the Shares and Rights Attached to the Shares

The Shares acquired under the Plan are shares of the Company's common stock, which will allow a shareholder to participate in:

- *Dividends* – If and when declared payable by the Company as authorized in its bylaws.
- *Voting* – A shareholder will be entitled to vote at the Company's shareholder meetings where each of the Shares will count for one vote.
- *Information Reporting* – A shareholder will have the right to receive certain information from the Company such as the Company's annual report to shareholders and annual proxy statement. The Company can make such information available for its shareholders at its office and/or via its website.
- *Liquidation Proceeds* – In the event of liquidation, dissolution or winding up of the Company, the holders of Shares are entitled to share ratably in all assets remaining after payment of or provisions for the Company's liabilities, subject to prior rights or preferred stock, if any, then outstanding.
- *No Preemptive, Redemptive or Conversion Provisions* – The Shares are not entitled to preemptive rights and are not subject to conversion or redemption.

With respect to Shares subject to the purchase right under the Plan, you will not be deemed a shareholder with the above rights until the Shares have been purchased and delivered to you.

The Company may issue other classes of shares and/or securities which are not part of this offer and the Plan.

Note that the Company may, at any time, but subject to the passing of a shareholder vote, amend its Bylaws and/or Certificate of Incorporation in a way that impacts the rights of holders of the Shares. These documents can be found on the Company's website at <https://investors.paloaltonetworks.com>.

Additional Information about the Plan

Additional information about the Plan can be found in your participant account on the website of the Broker (or any successor to the Broker). Requests for information about the Plan also can be directed to stockadmin@paloaltonetworks.com.

* * * * *

IMPORTANT NOTE

The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding whether or not you decide to participate in the Plan. You should consult with your personal tax, legal and financial advisors regarding whether to participate in the Plan before taking any action related to the Plan. Further, depending upon where the Shares are listed, the country of your residence and/or the country in which your broker resides, you may be subject to insider trading restrictions and/or market abuse laws that may affect your ability to accept, acquire, sell or otherwise dispose of Shares, rights to Shares (e.g., purchase rights) or rights linked to the value of Shares during such times you are considered to have "inside information" regarding the Company as defined by the laws or regulations in your country. Local insider trading laws and regulations also may prohibit the cancellation or amendment of orders you place before you possessed inside information. Furthermore, you could be prohibited from (i) disclosing the inside information to any third party (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them otherwise to buy or sell securities. Third parties may include fellow employees. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. Please note that it is your personal responsibility to comply with any applicable requirements or restrictions, and you should consult with your personal legal advisor to determine your personal obligations and duties.

EXHIBIT D

PALO ALTO NETWORKS, INC.

2012 EMPLOYEE STOCK PURCHASE PLAN

**Important Note on the Form of Election to Transfer the Employer's
Secondary Class 1 National Insurance Liability to the Participant**

As a condition of participation in the Palo Alto Networks, Inc. 2012 Employee Stock Purchase Plan (the “**ESPP**”) and the option to purchase shares of Palo Alto Networks, Inc. (the “**Company**”) that may be granted to you by the Company, you are required to enter into a joint election to transfer to you any liability for the employer’s secondary Class 1 National Insurance Contributions (the “**Employer’s Liability**”) that may arise on the occurrence of a taxable event in respect of the option to purchase shares under the ESPP (the “**Joint Election**”).

By entering into the Joint Election:

- you agree that any Employer’s Liability that may arise in connection with or pursuant to the option to purchase shares (and the acquisition of the Company’s shares) or other taxable events in connection with the option to purchase shares will be transferred to you; and
- you authorize the Company and/or your employer to recover an amount sufficient to cover this liability by any method set forth in the Non-U.S. ESPP Subscription Agreement and/or the Joint Election.

Please read the terms of the Joint Election carefully before agreeing to enroll in the ESPP.

You understand that by providing your electronic signature and thereby enrolling in the ESPP, you are agreeing to be bound by the terms of the Joint Election.

PALO ALTO NETWORKS, INC.

2012 EMPLOYEE STOCK PURCHASE PLAN

FORM OF ELECTION TO TRANSFER THE EMPLOYER'S SECONDARY CLASS 1 NATIONAL INSURANCE

LIABILITY TO THE PARTICIPANT

1. Parties

This Election is between:

- (a) The individual who has obtained authorized access to this Election (the "**Participant**"), who is employed by one of the UK companies listed on the Schedule attached hereto (the "**Employer**") and who is eligible to receive options to purchase shares of common stock of Palo Alto Networks, Inc. pursuant to the terms and conditions of the Palo Alto Networks, Inc. 2012 Employee Stock Purchase Plan (the "**ESPP**"), and
- (b) **Palo Alto Networks, Inc.** (the "**Company**"), whose registered office is at 3000 Tannery Way, Santa Clara, CA 95054, U.S.A., which is entering into this Election on behalf of the Employer.

2. Purpose of Election

- (a) This Election relates to the Employer's secondary Class 1 National Insurance Contributions (the "**Employer's Liability**") that may arise on the occurrence of a "Taxable Event" in respect of the options to purchase shares of the Company granted under the ESPP ("**Options**") pursuant to section 4(4)(a) and/or paragraph 3B(1A) of Schedule 1 of the Social Security Contributions and Benefits Act 1992 ("SCCBA"), including, without limitation:
 - (i) the acquisition of securities pursuant to the Options (within section 477(3)(a) ITEPA); and/or
 - (ii) the assignment or release of the Options in return for consideration (within section 477(3)(b) ITEPA); and/or
 - (iii) the receipt of a benefit in connection with the Options other than a benefit within (i) or (ii) above (within section 477(3)(c) ITEPA); and/or
 - (iv) post-acquisition charges relating to the shares acquired pursuant to the ESPP (within section 427 of ITEPA); and/or

- (v) post-acquisition charges relating to the shares acquired pursuant to the ESPP rights (within section 439 of the ITEPA).

In this Election, ITEPA means the Income Tax (Earnings and Pensions) Act 2003.

- (b) This Election is made in accordance with paragraph 3B(1) of Schedule 1 to SCCBA.
- (c) This Election applies to all Options granted under the ESPP up to the termination date of the ESPP.
- (d) This Election does not apply in relation to any liability, or any part of any liability, arising as a result of regulations being given retrospective effect by virtue of section 4B(2) of either the SCCBA, or the Social Security Contributions and Benefits (Northern Ireland) Act 1992.
- (e) This Election will not apply to the extent that it relates to relevant employment income, which is employment income of the earner by virtue of Chapter 3A of Part 7 of ITEPA (employment income: securities with artificially depressed market value).

3. The Election

The Participant and the Company jointly elect that the entire liability of the Employer to pay the Employer's Liability on the Taxable Event is hereby transferred to the Participant. The Participant understands that, by signing or electronically accepting this Election, he or she will become personally liable for the Employer's Liability covered by this Election.

4. Payment of the Employer's Liability

- (a) The Participant and the Company acknowledge that the Employer is under a duty to remit the Employer's Liability to HM Revenue & Customs on behalf of the Participant within fourteen (14) days after the end of the U.K. tax month during which the Taxable Event occurs (or within seventeen (17) days of the end of the U.K. tax month during which the Taxable Event occurs, if payments are made electronically), or such other period of time as may be prescribed. The Participant agrees to pay to the Employer the amount of the Employer's Liability on demand, at any time on or after the Taxable Event, and hereby authorises the Employer to account for the Employer's Liability to HM Revenue & Customs.
- (b) Without limitation to Clause 4.1 above, the Participant hereby authorises the Company and/or the Employer to collect the Employer's Liability from the Participant at any time after the Taxable Event:

 - (i) by deduction from salary or any other payment payable to the Participant at any time on or after the date of the Taxable Event; and/or

- (ii) directly from the Participant by payment in cash or cleared funds; and/or
- (iii) by arranging, on behalf of the Participant, for the sale of some of the securities which the Participant is entitled to receive pursuant to the Options; and/or
- (iv) through any other method as set forth in the relevant award agreement entered into between the Participant and the Company.
- (c) The Company hereby reserves for itself and the Employer the right to withhold the transfer of any securities to the Participant in respect of the ESPP until full payment of the Employer's Liability is received.

5. Duration of Election

- (a) The Participant and the Company agree to be bound by the terms of this Election regardless of whether the Participant is transferred, is abroad, or no longer renders services to the Employer on the date on which the Employer's Liability becomes due.
- (b) This Election will continue in effect until the earliest of the following:
 - (i) the date on which both the Participant and the Company agree in writing that it should cease to have effect;
 - (ii) the date on which the Company serves written notice on the Participant terminating its effect;
 - (iii) the date on which HM Revenue & Customs withdraws approval of this Election; or
 - (iv) the date on which, after due payment of the Employer's Liability in respect of the entirety of the Options to which this Election relates or could relate, this Election ceases to have effect according to its own terms.

Acceptance by the Participant

By providing your electronic signature and enrolling in the ESPP, the Participant agrees to be bound by the terms hereof as stated above.

Acceptance by the Company

The Company acknowledges that, by arranging for the scanned signature of an authorized representative to appear on this Election, the Company agrees to be bound by the terms hereof as stated above.

Signed for and on behalf of **Palo Alto Networks, Inc.**
Executive Vice President & General Counsel

Schedule of Employer Companies

The employing companies to which this Election relates are:

NAME:

Palo Alto Networks (UK) Limited Registered number: 06851390

Registered Office:	1st Floor, West Wing Davidson House, Forbury Square, Reading, Berkshire, RG1 3EU, UK
Corporation Tax District:	District 725 Large and Specialist Sheffield Government Buildings Ty Glas, Llanishen Cardiff, CF14 5 FP UK
Corporation Tax Reference:	14747 26068
PAYE Tax District:	120 – North East Metropolitan
PAYE Reference:	EA30525

**PALO ALTO NETWORKS, INC.
DEFERRED COMPENSATION PLAN**

Effective Date
June 1, 2022

TABLE OF CONTENTS

	Page
Article 1 Establishment and Purpose	<u>1</u>
Article 2 Definitions	<u>1</u>
Article 3 Eligibility and Participation	<u>6</u>
Article 4 Deferrals	<u>6</u>
Article 5 Company Contributions	<u>11</u>
Article 6 Payments from Accounts	<u>11</u>
Article 7 Valuation of Account Balances; Investments	<u>14</u>
Article 8 Administration	<u>15</u>
Article 9 Amendment and Termination	<u>17</u>
Article 10 Informal Funding	<u>17</u>
Article 11 Claims	<u>18</u>
Article 12 General Provisions	<u>22</u>

Article 1 *Establishment and Purpose*

Palo Alto Networks, Inc., a Delaware corporation (the “Company”), has adopted this Palo Alto Networks, Inc. Deferred Compensation Plan, effective June 1, 2022 (the “Effective Date”), for deferrals of Compensation earned after June 22, 2022.

The purpose of the Plan is to attract and retain key employees by providing them with an opportunity to defer receipt of a portion of their salary, annual bonus, restricted stock units, performance stock units, and other specified compensation. The Plan is not intended to meet the qualification requirements of Code Section 401(a) but is intended to meet the requirements of Code Section 409A and shall be operated and interpreted consistent with that intent.

The Plan constitutes an unsecured promise by the Company to pay benefits in the future. Each Participant in the Plan shall have the status of a general unsecured creditor of the Company. The Company shall be solely responsible for payment of the benefits under the Plan. The Plan is unfunded for federal tax purposes and is intended to be an unfunded arrangement for eligible employees who are part of a select group of management or highly compensated employees of the Company (within the meaning of Sections 201(2), 301(a)(3), and 401(a)(1) of ERISA). Any amounts set aside to defray the liabilities assumed by the Company will remain the general assets of the Company and shall remain subject to the claims of the Company’s creditors until such amounts are distributed to the Participants.

Article 2 *Definitions*

- 2.1 “Account” means a bookkeeping account maintained by the Committee to record the payment obligation of the Company to a Participant under the terms of the Plan. The Committee may maintain an Account to record the total obligation to a Participant and component Accounts to reflect amounts payable at different times and in different forms. Reference to an Account means any such Account established by the Committee, as the context requires. Accounts are intended to constitute “unfunded” obligations (within the meaning of Sections 201(2), 301(a)(3), and 401(a)(1) of ERISA).
- 2.2 “Account Balance” means, with respect to any Account, the total payment obligation owed to a Participant from such Account, determined as of the close of trading on the Exchange as of the most recent Business Day.
- 2.3 “Affiliate” means a corporation, trade, or business that, together with the Company, is treated as a single employer under Code Section 414(b) or (c).
- 2.4 “Beneficiary” means a natural person, estate, or trust designated by a Participant in accordance with Section 6.4 to receive payments to which a Beneficiary is entitled in accordance with the provisions of the Plan.
- 2.5 “Board” means the Board of Directors of the Company.
- 2.6 “Business Day” means each day on which the Exchange is open for business.
- 2.7 “Change in Control” means any of the following events, determined in accordance with Code Section 409A:
 - (a) *Change in Ownership*. A change in the ownership of the Company occurs on the date on which any one person, or more than one person acting as a group, acquires ownership of stock of the Company that, together with stock held by such person or group constitutes more than 50% of the total fair market value or total voting

power of the stock of the Company. The acquisition by a person or group owning more than 50% of the total fair market value or total voting power of the stock of the Company of additional shares of the Company shall not constitute a “change of the ownership” of the Company.

- (b) *Change in Effective Control.* A change in the effective control of the Company occurs on the date on which either: (i) a person, or more than one person acting as a group, acquires ownership of stock of the Company possessing 30% or more of the total voting power of the stock of the Company, taking into account all such stock acquired during the 12-month period ending on the date of the most recent acquisition, provided that the acquisition by a person or group owning more than 30% of the total fair market value or total voting power of the stock of the Company of additional shares of the Company shall not constitute a “change of effective control” of the Company; or (ii) a majority of the members of the Board is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of the Board prior to the date of the appointment or election.
- (c) *Change in Ownership of Substantial Portion of Assets.* A change in the ownership of a substantial portion of assets occurs on the date on which any one person, or more than one person acting as a group, other than a person or group of persons that is related to the Company, acquires assets from the Company that have a total gross fair market value equal to or more than 40% of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions, taking into account all such assets acquired during the 12-month period ending on the date of the most recent acquisition. A transfer of assets shall not be treated as a “change in the ownership of a substantial portion of the assets” when such transfer is made to an entity that is controlled by the shareholders of the transferor corporation as determined under Treas. Reg. Section 1.409A-3(i)(5)(vii)(B).

2.8 “Claimant” means a Participant or Beneficiary filing a claim under Article 11 of this Plan.

2.9 “Code” means the Internal Revenue Code of 1986, as amended.

2.10 “Code Section 409A” means Section 409A of the Code and regulations and other guidance issued by the Treasury Department and Internal Revenue Service thereunder.

2.11 “Committee” means the Company’s Compensation and People Committee or any other committee appointed by the Board or Compensation and People Committee to administer the Plan.

2.12 “Company Contribution” means a credit by the Company to a Participant’s Account in accordance with the provisions of Article 5. Unless the context clearly indicates otherwise, a reference to Company Contribution includes Earnings attributable to such contribution.

2.13 “Compensation” means a Participant’s (a) salary, annual bonus, commission, and other cash compensation approved by the Committee as Compensation that may be deferred under Section 4.2 and (b) grants of Equity Awards. Compensation excludes compensation that has been previously deferred under this Plan or any other arrangement subject to Code Section 409A and cash compensation that is not paid through U.S. payroll.

- 2.14 “Compensation Deferral Agreement” means an agreement between a Participant and the Company and, if applicable, the Participant’s Employer that specifies (a) the amount of each component of Compensation that the Participant has elected to defer under the Plan in accordance with the provisions of Article 4, (b) the Payment Schedule applicable to such Deferral, and (c) the Investment Allocation applicable to such Deferral.
- 2.15 “Deferral” means a credit to a Participant’s Account that records the portion of the Participant’s Compensation that the Participant has elected to defer under the Plan in accordance with the provisions of Article 4. Unless the context of the Plan clearly indicates otherwise, a reference to Deferrals includes Earnings attributable to such Deferrals.
- 2.16 “Earnings” means an adjustment to the value of an Account (including as a result of gains or losses) in accordance with Article 7.
- 2.17 “Eligible Employee” means an Employee who is actively employed in the U.S. and on the U.S. payroll of such Employee’s Employer and is a member of a select group of management or highly compensated employees who has been designated as an “Eligible Employee” for an applicable enrollment and meets any additional criteria established from time to time by the Committee in its sole discretion. An Employee shall become an Eligible Employee as of the first enrollment period after the date on which such Employee satisfies all of the foregoing conditions. An Employee whose status changes into such an eligible position shall become an Eligible Employee as of the first enrollment period following the date such Employee’s employment in such position commences so long as such Employee remains an Eligible Employee as of such enrollment period. The Committee reserves the right to exclude an otherwise Eligible Employee from participation in the Plan as it deems advisable in its sole and absolute discretion.
- 2.18 “Employee” means a common-law employee of the Company or any Affiliate.
- 2.19 “Employer” means the Company or its Affiliate that is the applicable Employee’s common-law employer.
- 2.20 “Equity Award” means an award of restricted stock units (“RSUs”) or performance stock units (“PSUs”) granted by the Company under its Equity Plan, (and, for the avoidance of doubt, does not include any awards of stock options or stock appreciation rights); provided that the Committee may in its sole discretion exclude any RSUs or PSUs from Deferrals under the Plan.
- 2.21 “Equity Plan” means the Palo Alto Networks, Inc. 2021 Equity Incentive Plan or any successor, predecessor, or other equity plan under which the Company grants, or has granted, Equity Awards, but for the avoidance of doubt excluding equity awards assumed by the Company in a merger or other acquisition.
- 2.22 “ERISA” means the Employee Retirement Income Security Act of 1974, as amended.
- 2.23 “Exchange” means the securities exchange on which the Shares are then currently trading. As of the Effective Date, the Exchange refers to the Nasdaq Stock Market.
- 2.24 “Initial Payment Date” means the first scheduled Payment Date with respect to an Account.

- 2.25 “Payment Date” means the date on which Shares are actually issued or cash paid with respect to any Deferral.
- 2.26 “Payment Schedule” means a designation of the date or period on or in which payment of an Account will commence and the form in which payment of such Account will be made.
- 2.27 “Performance-Based Compensation” means Compensation that is contingent in whole or in part on the satisfaction of pre-established organizational or individual performance criteria relating to a performance period of at least 12 consecutive months. Organizational or individual performance criteria are considered pre-established if approved by the Committee by not later than 90 days after the commencement of the period of service to which the criteria relate, provided that the outcome is substantially uncertain at the time the criteria are established. Compensation may nevertheless be Performance-Based Compensation if the Compensation will be paid without regard to performance in the event of the Participant’s death or “disability” (as defined in Treas. Reg. Section 1.409A-1(e)(1)) or a Change in Control, provided that any payment made under such circumstances without regard to performance will not itself qualify as Performance-Based Compensation.
- 2.28 “Plan” means this Palo Alto Networks, Inc. Deferred Compensation Plan, as may be amended from time to time. However, to the extent permitted or required under Code Section 409A, the term “Plan” may in the appropriate context also mean a portion of the Plan that is treated as a single plan under Treas. Reg. Section 1.409A-1(c), or the Plan or portion of the Plan and any other nonqualified deferred compensation plan or portion thereof that is treated as a single plan under such Section.
- 2.29 “Plan Year” means January 1 through December 31.
- 2.30 “Separation Account” means an Account established by the Committee in accordance with a Participant’s Compensation Deferral Agreement to record Deferrals allocated to such Account by the Participant and that are payable upon the Participant’s Separation from Service in accordance with Section 6.3.
- 2.31 “Separation from Service” means an Employee’s termination of employment with the Company and all Affiliates.

Except in the case of an Employee on a bona fide leave of absence as provided below, an Employee is deemed to have incurred a Separation from Service if the Employer and the Employee reasonably anticipated that the level of services to be performed by the Employee after a date certain would be reduced to 20% or less of the average services rendered by the Employee during the immediately preceding 36-month period (or the total period of employment, if less than 36 months), disregarding periods during which the Employee was on a bona fide leave of absence.

An Employee who is absent from work due to military leave, sick leave, or other bona fide leave of absence incurs a Separation from Service on the first date immediately following the later of (a) the six-month anniversary of the commencement of the leave and (b) the expiration of the Employee’s right, if any, to reemployment under statute or contract.

If a Participant ceases to provide services as an Employee and begins providing services as an independent contractor (other than as a non-employee director) for the Company or any of its Affiliates, a Separation from Service will then occur only if the Employer and

the Employee reasonably anticipate, as of the time of the change, that the level of services to be provided as an independent contractor are such that a Separation from Service (as described above) would have occurred if the Employee had continued to provide services at that level as an Employee. If no Separation from Service pursuant to the preceding sentence occurs as of the date an Employee becomes such an independent contractor, then a Separation from Service shall occur only upon the 12-month anniversary of the date on which all service contracts between the Employee and the Employer have expired, provided the Participant does not perform services for the Employer during that 12-month period.

For purposes of determining whether a Separation from Service has occurred, the Employer means the Employer, as defined in Section 2.19, except that in applying Code Sections 1563(a)(1), (2), and (3) for purposes of determining whether another organization is an Affiliate under Code Section 414(b), and in applying Treasury Regulation Section 1.414(c)-2 for purposes of determining whether another organization is an Affiliate under Code Section 414(c), “at least 50 percent” shall be used instead of “at least 80 percent” in each place it appears in those Code Sections.

The Committee specifically reserves the right to determine whether a sale or other disposition of substantial assets to an unrelated party constitutes a Separation from Service with respect to a Participant providing services to the seller immediately prior to the transaction and providing services to the buyer after the transaction.

2.32 “Share” means a share of the Company’s common stock.

2.33 “Specified Date Account” means an Account established by the Committee to record the amounts payable in a future year, as specified in the Participant’s Compensation Deferral Agreement. Unless the Committee specifies otherwise during an applicable enrollment, a Participant may maintain no more than five Specified Date Accounts at any one time (other than certain Specified Date Accounts for Deferrals of Equity Awards described in Section 4.2(e)).

Article 3 *Eligibility and Participation*

3.1 Eligibility and Participation. All Eligible Employees may enroll in the Plan during the enrollment periods established by the Committee. Eligible Employees become “Participants” on the first to occur of (a) the date on which the first Compensation Deferral Agreement becomes irrevocable under Article 4 and (b) the date Company Contributions are credited to an Account on behalf of such Eligible Employee.

3.2 Duration. Only Eligible Employees may submit Compensation Deferral Agreements during an enrollment period and receive Company Contributions during the Plan Year. A Participant who is no longer an Eligible Employee but has not incurred a Separation from Service will not be allowed to submit Compensation Deferral Agreements but may otherwise exercise all of the rights of a Participant under the Plan with respect to such Participant’s existing Accounts. On and after a Separation from Service, a Participant shall remain a Participant as long as such Participant has any Account Balance that is greater than zero. All Participants, regardless of employment status, will continue to be credited with Earnings and during such time may continue to make allocation elections as provided in Section 7.4. A Participant shall cease being a Participant in the Plan when all of such Participant’s Accounts have been reduced to zero.

3.3 Rehires. An Eligible Employee who Separates from Service and who subsequently resumes performing services for an Employer in the same calendar year (regardless of

eligibility) will have such Eligible Employee's Compensation Deferral Agreements for such year, if any, cancelled at the time of such Separation from Service, and such Eligible Employee's eligibility to submit Compensation Deferral Agreements shall be governed by the provisions of Article 4.

Article 4 *Deferrals*

4.1 Deferral Elections, Generally.

- (a) An Eligible Employee may make an initial election to defer Compensation by submitting a Compensation Deferral Agreement during any enrollment period established by the Committee and in the manner specified by the Committee, but in any event, in accordance with Section 4.2. If an Eligible Employee ceases to be an Eligible Employee during any such enrollment period, then such former Eligible Employee shall not be eligible to submit a Compensation Deferral Agreement with respect to such enrollment period. Unless an earlier date is specified in the enrollment materials or Compensation Deferral Agreement, deferral elections with respect to a Compensation source (such as salary, annual bonus, Equity Awards, or other Compensation) become irrevocable on the latest date applicable to such Compensation source under Section 4.2.
- (b) A Compensation Deferral Agreement that is not timely filed with respect to a service period or component of Compensation, or that is submitted by a Participant who Separates from Service prior to the latest date such agreement would become irrevocable under Code Section 409A, shall be considered null and void and shall not take effect with respect to such service period or component of Compensation. The Committee may modify or revoke any Compensation Deferral Agreement prior to the date on which such Compensation Deferral Agreement becomes irrevocable under the rules of Section 4.2. If an Eligible Employee ceases to be an Eligible Employee prior to the date on which a Compensation Deferral Agreement becomes irrevocable under the rules of Section 4.2, then such Compensation Deferral Agreement shall be considered null and void and shall not take effect.
- (c) The Committee may permit different deferral amounts for each component of Compensation and may establish a minimum or maximum deferral amount for each such component. Unless otherwise specified by the Committee in the enrollment materials or Compensation Deferral Agreement, Participants may defer (i) a minimum of 5% and a maximum of 50% of the annual base salary earned in any Plan Year, (ii) a minimum of 5% and a maximum of 100% of annual cash bonuses and commissions earned in any Plan Year, and (iii) a minimum of 5% and a maximum of 100% of any Equity Award or, to the extent the Participant is permitted to defer the unvested tranche(s) of an Equity Award, the applicable unvested tranche(s).
- (d) Deferrals of cash Compensation shall be calculated with respect to the gross cash Compensation payable to the Participant prior to any deductions or withholdings (including any withholdings under Section 8.4). Deferrals of an Equity Award or the applicable vesting tranche(s) of an Equity Award shall be calculated as a percentage of the Equity Award or vesting tranche, as specified in the enrollment materials, with deferrals of any fractional stock units rounded down to the nearest whole stock unit. To the extent permissible under Code Section 409A, the Committee may in its discretion reduce deferrals of Participants so as to not

exceed 100% of the cash Compensation of such Participant (after taking into account all of the Participant's other deductions and withholdings).

- (e) The Eligible Employee shall specify in a Compensation Deferral Agreement the amount of Deferrals, whether to allocate Deferrals to a Separation Account or to a Specified Date Account, and the Investment Alternative(s) that will be applicable to such Deferral. Deferrals of the vesting tranche(s) of an Equity Award pursuant to Section 4.2(e) may be allocated only to a Specified Date Account, based on the vesting dates applicable to each deferred Equity Award. Except for Equity Awards deferred pursuant to Section 4.2(e), if no designation is made, Deferrals shall be allocated to a Separation Account.

4.2 Timing Requirements for Compensation Deferral Agreements.

- (a) *Initial Eligibility.* If an Employee becomes an Eligible Employee during the middle of a Plan Year, such Eligible Employee may elect to defer such Eligible Employee's (i) base salary and annual cash incentive compensation earned in such Plan Year after the date of such election and/or (ii) Equity Awards previously granted to such Eligible Employee, if and to the extent permitted in accordance with procedures established by the Committee. The Compensation Deferral Agreement must be filed within 30 days after such Employee first becomes an Eligible Employee and shall become irrevocable not later than such 30th day (the "Initial Eligibility Period End Date"). A Compensation Deferral Agreement filed under this paragraph applies only to Compensation earned after the date that the Compensation Deferral Agreement becomes irrevocable, and for such purpose any annual cash incentive compensation or Equity Award deferred pursuant to this Section 4.2(a) shall be prorated to reflect the portion of such compensation earned after such date. Elections to defer Compensation made pursuant to Compensation Deferral Agreements submitted after the Initial Eligibility Period End Date shall be governed by the other rules in this Section 4.2.
- (b) *Prior-Year Elections.*
 - (i) *General.* Unless a more specific rule in this Section 4.2 applies, the Committee may permit an Eligible Employee to defer Compensation by filing a Compensation Deferral Agreement no later than December 31 of the year prior to the year in which the Compensation to be deferred is earned. A Compensation Deferral Agreement filed under this paragraph shall become irrevocable with respect to such Compensation not later than the December 31 filing deadline (or any earlier date specified in the enrollment materials).
 - (ii) *Types of Compensation Deferred.* As of the Effective Date (but subject to change thereafter), this Section 4.2(b) would apply to elections to defer Compensation constituting annual base salary and commissions.
- (c) *Performance-Based Compensation.*
 - (i) *General.* The Committee may permit an Eligible Employee to defer Compensation that qualifies as Performance-Based Compensation by filing a Compensation Deferral Agreement no later than the date that is six months before the end of the applicable performance period, provided that:

- A. the Eligible Employee remains an Eligible Employee continuously from the later of the beginning of the performance period and the date the performance criteria are established through the date the Compensation Deferral Agreement is submitted; and
- B. the Compensation is not readily ascertainable as of the date the Compensation Deferral Agreement is filed.

Any election to defer Performance-Based Compensation that is made in accordance with this paragraph and that becomes payable as a result of the Participant's death or upon a "change in control" (as defined in Treas. Reg. Section 1.409A-3(i)(5)) prior to the satisfaction of the performance criteria will be void unless it would be considered timely under another rule described in this Section 4.2.

- (ii) *Types of Compensation Deferred.* As of the Effective Date (but subject to change thereafter), this Section 4.2(c) would apply to elections to defer Compensation constituting annual cash incentives, certain PSUs that are outstanding as of the date of such election, and PSUs that are granted after the date of such election.

(d) *Certain Forfeitable Rights.*

- (i) *General.* With respect to a legally binding right to Compensation in a subsequent year that is subject to a forfeiture condition requiring the Participant's continued services for a period of at least 12 months from the date the Participant obtains the legally binding right, the Committee may permit an Eligible Employee to defer such Compensation by filing a Compensation Deferral Agreement on or before the 30th day after the legally binding right to the Compensation accrues, provided that the Compensation Deferral Agreement is submitted at least 12 months in advance of the earliest date on which the forfeiture condition could lapse, other than due to the Participant's death or "disability" (as defined in Treas. Reg. Section 1.409A-3(i)(4)) or in connection with a Change in Control. The Compensation Deferral Agreement described in this paragraph becomes irrevocable not later than such 30th day. If the forfeiture condition applicable to the payment lapses before the end of such 12-month period as a result of the Participant's death or such disability or in connection with a Change in Control, the Compensation Deferral Agreement will be void unless it would be considered timely under another rule described in this Section 4.2.

- (ii) *Types of Compensation Deferred.* As of the Effective Date (but subject to change thereafter), this Section 4.2(d) would apply to elections to defer the portion of grants of RSUs that vest no earlier than the 12-month anniversary of the later of (A) the grant date and (B) the last day of the applicable enrollment period and in each case do not provide for accelerated vesting (other than upon a termination due to death or such disability or in connection with a Change in Control).

(e) *Short-Term Deferrals.*

- (i) *General.* The Committee may permit Compensation that meets the definition of a "short-term deferral" described in Treas. Reg. Section

1.409A-1(b)(4) to be deferred pursuant to an election made at least 12 months prior to the date on which such Compensation is scheduled to become vested in accordance with such Compensation's ordinary vesting schedule (i.e., without accounting for accelerated vesting provisions), provided that the Initial Payment Date for such Deferral is not earlier than the first day of the Plan Year following the fifth anniversary of the date on which such Compensation is scheduled to become vested in accordance with such ordinary vesting schedule (regardless of when vesting actually occurs). If the Compensation deferred pursuant to this Section 4.2(e) vests on multiple dates, the Initial Payment Date may not be earlier than the fifth anniversary of the latest of such vesting dates. A Compensation Deferral Agreement submitted in accordance with this paragraph becomes irrevocable as of the end of the applicable enrollment period. If the forfeiture condition applicable to the payment lapses before the 12-month anniversary of the last date of the applicable enrollment period, the Compensation Deferral Agreement will be void unless it would be considered timely under another rule described in this Section 4.2.

(ii) *Types of Compensation Deferred.* This Section 4.2(e) would apply to elections to defer vesting tranches of RSUs or PSUs that cannot be deferred pursuant to Section 4.2(c) or 4.2(d) but are scheduled to vest at least 12 months after the last day of the applicable enrollment period, which as of the Effective Date (but subject to change thereafter) includes certain vesting tranches with respect to certain RSUs and PSUs that were granted more than 30 days prior to the date of such election; provided that in each case such Deferral election shall apply only to the portion of such award that is scheduled to vest at least 12 months after the last day of the applicable enrollment period.

(f) *"Evergreen" Deferral Elections.* The Committee may, in its discretion, provide that Compensation Deferral Agreements will continue in effect for subsequent years or performance periods by communicating that intention to Participants in writing prior to the date Compensation Deferral Agreements become irrevocable under this Section 4.2. An evergreen Compensation Deferral Agreement may be revoked or modified in writing prospectively by the Participant or the Committee with respect to Compensation for which such election remains revocable under this Section 4.2. A Compensation Deferral Agreement is deemed to be revoked for subsequent years if the Participant is not an Eligible Employee as of the last permissible date for making elections under this Section 4.2 or if the Compensation Deferral Agreement is canceled in accordance with Section 4.6.

4.3 Allocation of Deferrals. A Compensation Deferral Agreement may allocate a Deferral to a Separation Account or to a Specified Date Account. If a Participant's Compensation Deferral Agreement allocates a component of Compensation to a Specified Date Account that commences payment in the year such Compensation is earned or otherwise before any minimum deferral period established by the Committee or required by law for such Specified Date Account, the Compensation Deferral Agreement shall be deemed to allocate the Deferral to the Participant's Specified Date Account having the next earliest payment year (including, if applicable, taking into consideration any minimum deferral period established by the Committee or required by law for a Specified Date Account). If the Participant has no other available Specified Date Accounts after the application of the preceding sentence, then the Committee will allocate the Deferral to the Participant's Separation Account.

- 4.4 Deductions from Pay. The Committee has the authority to determine the payroll practices under which any component of Compensation subject to a Compensation Deferral Agreement will be deducted from a Participant's Compensation.
- 4.5 Vesting. Participant Deferrals of cash Compensation shall be 100% vested at all times after they are credited to the Participant's applicable Account. Deferrals of Equity Awards (or a portion thereof) shall take effect upon the satisfaction of the vesting conditions of the underlying Equity Award (or portion thereof) and shall thereafter be fully vested to the extent such vesting conditions are satisfied.
- 4.6 Cancellation of Deferrals. The Committee may cancel a Participant's Deferrals during periods of "disability" (as defined in Treas. Reg. Section 1.409A-3(j)(xii)), provided that cancellation occurs by the later of (a) the end of the taxable year of the Participant and (b) the 15th day of the 3rd month following the date the Participant incurs such disability.

Article 5 *Company Contributions*

- 5.1 Discretionary Company Contributions. The Company may, in its sole and absolute discretion, credit discretionary Company Contributions in the form of matching, profit sharing, or other contributions to any Participant in any amount determined by the Company. Company Contributions shall be credited to the Participant's Account specified by the Committee. Discretionary Company Contributions are credited at the sole discretion of the Company, and the fact that a discretionary Company Contribution is credited in one year shall not obligate the Company to continue to make such Company Contributions in subsequent years.
- 5.2 Vesting. Company Contributions vest according to the schedule specified by the Committee on or before the time the contributions are made. The Company may elect to accelerate vesting of Company Contributions for any Participant, at any time, in its sole discretion.

Article 6 *Payments from Accounts*

- 6.1 General Rules. Each Account will become payable in accordance with Sections 6.2 (if elected) through 6.8.

Payment Schedules elected by a Participant shall be set forth in a valid Compensation Deferral Agreement that designates the Account to which such elections apply in accordance with Article 4 or in a valid modification election applicable to such Account as described in Section 6.8.

All Accounts shall be paid in Shares, issued under the Equity Plan, provided that an Account shall be paid in cash to the extent there are insufficient Shares available under the Equity Plan to make such payment in Shares. A Participant's right to receive Shares in accordance with the terms of the Plan shall be considered a grant of a stock unit award under the Equity Plan in connection with the Participant's employment with the Company. To the extent that an Account is paid in Shares, the amount payable with respect to any Payment Date shall be determined by dividing the dollar value of the amount to be paid by the closing trading price of a Share on the Exchange as of the last day (or if such date is not a Business Day, the immediately preceding Business Day) of the month preceding the month in which such Payment Date occurs. No Deferrals will be paid in fractional Shares, and any Deferrals that cannot be paid in full Shares will instead be paid in cash.

6.2 Specified Date Accounts.

- (a) *Commencement.* A Participant may elect to credit any Deferral to a Specified Date Account, the payment of which shall be made or begin in the calendar year designated by the Participant for such Account on a Payment Date determined by the Committee. Except for Deferrals of Equity Awards pursuant to Section 4.2(e), the Initial Payment Date of a Specified Date Account may not be less than 2 years or more than 15 years after the Plan Year in which the deferral election is made. The Initial Payment Date for Equity Awards deferred under the provisions of Section 4.2(e) will be no earlier than the 5th anniversary and no later than the 15th anniversary of the date on which such Equity Award is scheduled to become vested under the terms of the award (disregarding any accelerated vesting conditions under the terms of such award). A separate Specified Date Account will be established to record the amounts deferred and the year in which the Initial Payment Date occurs with respect to amounts deferred under Section 4.2(e), and such Accounts will not count toward the maximum number of Specified Date Accounts that a Participant may maintain under the terms of this Plan.
- (b) *Form of Payment.* Payments from any Specified Date Account will be made in a single distribution, unless the Participant elects in the relevant Compensation Deferral Agreement to receive such payments in a designated number of substantially equal annual installments payable over a period of up to 10 years.

6.3 Separation from Service.

- (a) *General.* A Participant may elect to credit any Deferral, other than a Deferral pursuant to Section 4.2(e), to a Separation Account, the payment of which shall be made or begin following the Participant's Separation from Service.
- (b) *Commencement.* The Initial Payment Date for each Separation Account will be determined by the Committee and will occur in the calendar year after the calendar year in which Separation from Service occurs, provided that such Initial Payment Date must be no earlier than six months following the applicable Participant's Separation from Service.
- (c) *Form of Payment.* Payments from any Separation Account will be made in a single distribution, unless the Participant elects in the relevant Compensation Deferral Agreement to receive such payments in a designated number of substantially equal annual installments payable over a period of up to 10 years.

6.4 Death. Notwithstanding anything to the contrary in this Article 6, upon the death of the Participant (regardless of whether such Participant is an Employee at the time of death), all remaining vested Account Balances shall be paid to such Participant's Beneficiary in a single distribution no later than December 31 of the calendar year following the year of the Participant's death.

- (a) *Designation of Beneficiary in General.* The Participant shall designate a Beneficiary in the manner and on terms and conditions as the Committee may prescribe. No such designation shall become effective unless filed with the Committee during the Participant's lifetime. Any designation shall remain in effect until a new designation is filed with the Committee, except that if a Participant designates such Participant's spouse as a Beneficiary, then such designation shall be automatically revoked upon the dissolution of the marriage unless, following such dissolution, the Participant submits a new designation

naming the former spouse as a Beneficiary. A Participant may change such Participant's designated Beneficiary without the consent of a previously designated Beneficiary by filing a new designation with the Committee.

- (b) *No Beneficiary.* If a designated Beneficiary does not survive the Participant, or if there is no valid Beneficiary designation, amounts payable under the Plan upon the death of the Participant shall be paid to the Participant's spouse, or if there is no surviving spouse, then to the duly appointed and currently acting personal representative of the Participant's estate.
- 6.5 Administrative Cash-Out of Small Balances. Notwithstanding anything to the contrary in this Article 6, the Committee may at any time and without regard to whether a payment event has occurred, direct in writing an immediate single distribution of all of the Participant's Accounts if the Account Balance of such Accounts, combined with any other amounts required to be treated as deferred under a single plan pursuant to Code Section 409A, does not exceed the applicable dollar amount under Code Section 402(g)(1)(B), provided any other such aggregated amounts are also distributed in a single distribution at the same time.
- 6.6 Acceleration of or Delay in Payments. Notwithstanding anything to the contrary in this Article 6, the Committee, in its sole and absolute discretion, may elect to accelerate the time or form of payment of an Account, provided such acceleration is permitted under Treas. Reg. Section 1.409A-3(j)(4). The Committee may also, in its sole and absolute discretion, delay the time for payment of an Account, to the extent permitted under Treas. Reg. Section 1.409A-2(b)(7).
- 6.7 Rules Applicable to Installment Payments. If a Payment Schedule specifies installment payments, payment will be made beginning as soon as administratively practicable after the Initial Payment Date for such installments and shall continue to be made in each subsequent payment period until the number of installment payments specified in the Payment Schedule has been paid. The amount of each installment payment shall be determined by dividing (a) the Account Balance as of the last Business Day in the month preceding the month of payment, by (b) the remaining number of installment payments. For purposes of Section 6.8, installment payments will be treated as a single payment. If an Account is payable in installments, the Account will continue to be credited with Earnings in accordance with Article 7 until the Account is completely distributed.
- 6.8 Modifications to Payment Schedules. A Participant may modify the Payment Schedule elected by such Participant with respect to an Account, consistent with the permissible Payment Schedules available under Sections 6.2 and 6.3, as applicable, provided such modification complies with the requirements of this Section 6.8.
- (a) *Time of Election.* The modification election must be submitted to the Committee not less than 12 months prior to the Initial Payment Date under the Payment Schedule in effect prior to modification (the "Prior Election").
- (b) *Date of Payment under Modified Payment Schedule.* The Initial Payment Date under the modified Payment Schedule must be no earlier than five years after the Initial Payment Date under the Prior Election. Under no circumstances may a modification election result in an acceleration of payments in violation of Code Section 409A. If the Participant modifies only the form of payments and not the Initial Payment Date, payments shall commence not earlier than the fifth anniversary of the Initial Payment Date under the Prior Election.

- (c) *Irrevocability; Effective Date.* A modification election is irrevocable when filed and becomes effective 12 months after the filing date.
- (d) *Effect on Accounts.* An election to modify a Payment Schedule is specific to the Account or payment event to which it applies and shall not be construed to affect the Payment Schedules of any other Accounts or payment events.

Article 7 *Valuation of Account Balances; Investments*

- 7.1 **Valuation.** Deferrals shall be credited to appropriate Accounts on the date that deferred Compensation would have been paid to the Participant absent the Compensation Deferral Agreement. Valuation of Accounts shall be performed under procedures approved by the Committee.
- 7.2 **Earnings Credit.** Each Account will be credited with Earnings on each Business Day (unless another period is specified by the Committee with respect to a particular investment option), based upon the Participant's investment allocation, with respect to each Deferral, among a menu of investment options selected in advance by the Committee, in accordance with the provisions of this Article 7 ("Investment Allocation").
- 7.3 **Investment Options.** Investment options will be determined by the Committee. The Committee, in its sole discretion, shall be permitted to add or remove investment options from the Plan menu at any time to be effective on a prospective basis. The Investment options may include, without limitation, notional Shares, notional mutual fund shares, and notional alternative investments measured by reference to Shares.
- 7.4 **Investment Allocations.** An Investment Allocation constitutes a deemed, not actual, investment among the investment options comprising the investment menu. At no time shall a Participant have any real or beneficial ownership in any investment option included in the investment menu, nor shall the Company or any trustee acting on its behalf have any obligation to purchase actual securities as a result of an Investment Allocation. An Investment Allocation shall be used solely for purposes of adjusting the value of a Participant's Account Balances.

A Participant shall specify an Investment Allocation for each Deferral in accordance with procedures established by the Committee. Allocation among the investment options must be designated in increments of 1%. A Participant may change an Investment Allocation in accordance with procedures adopted by the Committee.
- 7.5 **Unallocated Deferrals.** If the Participant fails to make an Investment Allocation with respect to a Deferral of an Equity Award, such Deferral shall be invested in notional Shares. If a Participant fails to make an Investment Allocation with respect to a Deferral of any other Compensation, such Deferral shall be invested in a notional mutual fund specified by the Committee.
- 7.6 **Adjustments.** In the event that any extraordinary dividend or other extraordinary distribution (whether in the form of cash, Shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, reclassification, repurchase, or exchange of Shares or other securities of the Company, or other change in the corporate structure of the Company affecting the Shares occurs (other than any ordinary dividends or other ordinary distributions), the Committee, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the Plan, will adjust

the number of notional Shares and notional alternative investments measured by reference to Shares with respect to all Account Balances under the Plan.

Article 8 *Administration*

8.1 Plan Administration. This Plan shall be administered by the Committee, which shall have discretionary authority to make, amend, interpret, and enforce all appropriate rules and regulations for the administration of this Plan and to utilize its discretion to decide or resolve any and all questions in connection with the Plan, including eligibility for benefits and interpretations of this Plan and its terms. Claims for benefits shall be filed with the Committee and resolved in accordance with the claims procedures in Article 11.

8.2 Administration Upon Change in Control. Upon a Change in Control, the Committee, as constituted immediately prior to such Change in Control, shall continue to act as the Committee. The Committee, by a vote of a majority of its members, shall have the authority (but shall not be obligated) to appoint an independent third party to act as the Committee.

Upon such Change in Control, the Company may not remove the Committee or its members, unless a majority of Participants and Beneficiaries with Account Balances consent to the removal and replacement of the Committee.

The Company shall: (a) pay all reasonable expenses and fees of the Committee; (b) indemnify the Committee (including individuals serving as Committee members) against any costs, expenses and liabilities, including attorneys' fees and expenses arising in connection with the performance of the Committee's duties hereunder, except with respect to matters resulting from the Committee's gross negligence or willful misconduct; and (c) supply full and timely information to the Committee on all matters related to the Plan, any rabbi trust, Participants, Beneficiaries and Accounts as the Committee may reasonably require.

8.3 Delegation of Authority. In the administration of this Plan, the Committee may employ agents and delegate to them any administrative duties that the Committee sees fit and may consult with legal counsel and other advisors.

8.4 Withholding. The Company and each Employer shall have the right to withhold from any payment due under the Plan (or with respect to any amounts credited to the Plan) any taxes required by law to be withheld in respect of such payment (or credit). Such withholdings may be made in accordance with any applicable procedures established by the Committee, including by (a) requiring the Participant to pay cash, check, or other cash equivalents, (b) having the Company withhold otherwise deliverable Shares having a fair market value equal to the minimum statutory amount applicable in the Participant's jurisdiction or such greater amount as the Committee may determine (including up to a maximum statutory amount) if such amount would not have adverse accounting consequences, as the Committee determines in its sole discretion, (c) requiring the Participant to deliver to the Company already-owned Shares having a fair market value equal to the minimum statutory amount applicable in the Participant's jurisdiction or such greater amount as the Committee may determine (including up to a maximum statutory amount), in each case, provided the delivery of such Shares will not result in any adverse accounting consequences, as the Committee determines in its sole discretion, (d) selling a sufficient number of Shares otherwise deliverable to the Participant through such means as the Committee may determine in its sole discretion (whether through a broker or otherwise) to cover the amount of the withholding obligation, (e) having the Company or an Employer withhold from wages or any other cash amount due or to become due to the

Participant and payable by the Company or any Employer, (f) any other method of withholding determined by the Committee, or (g) any combination of the foregoing methods of payment. Withholdings with respect to amounts credited to the Plan shall be deducted from Compensation that has not been deferred to the Plan.

- 8.5 Indemnification. The Company shall indemnify and hold harmless each employee, officer, director, agent, and organization to whom or to which are delegated duties, responsibilities, and authority under the Plan or otherwise with respect to administration of the Plan, including the Committee and its delegees and its agents, against all claims, liabilities, fines, and penalties, and all expenses reasonably incurred by or imposed upon them (including reasonable attorneys' fees) that arise as a result of their actions or failure to act in connection with the operation and administration of the Plan, to the extent lawfully allowable and to the extent that such claim, liability, fine, penalty, or expense is not paid for by liability insurance purchased or paid for by the Company. Notwithstanding the foregoing, the Company shall not indemnify any person or organization if their actions or failure to act are due to gross negligence or willful misconduct or for any amount incurred through any settlement or compromise of any action, unless the Company consents in writing to such settlement or compromise.
- 8.6 Binding Decisions or Actions. The decision or action of the Committee in respect of any question arising out of or in connection with the administration, interpretation, and application of the Plan and the rules and regulations thereunder shall be final and conclusive and binding upon all persons having any interest in the Plan.

Article 9 *Amendment and Termination*

- 9.1 Amendments. The Company, by action taken by the Board or the Compensation and People Committee, may amend the Plan at any time and for any reason, provided that any such amendment shall not reduce the vested Account Balances of any Participant accrued as of the date of any such amendment.
- 9.2 Termination. The Company, by action taken by the Board, may terminate the Plan and pay Participants and Beneficiaries their Account Balances in a single distribution at any time, to the extent and in accordance with Treas. Reg. Section 1.409A-3(j)(4) (ix).
- 9.3 Accounts Taxable Under Code Section 409A. The Plan is intended to constitute a plan of deferred compensation that meets the requirements for deferral of income taxation under Code Section 409A. The Committee, pursuant to its authority to interpret the Plan, may sever from the Plan or any Compensation Deferral Agreement any provision or exercise of a right that otherwise would result in a violation of Code Section 409A.

Article 10 *Informal Funding*

- 10.1 General Assets. Obligations established under the terms of the Plan may be satisfied from the general funds of the Company or a trust described in this Article 10. No Participant, spouse, or Beneficiary shall have any right, title, or interest in assets of the Company. Nothing contained in this Plan, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind, or a fiduciary relationship, between the Company and any Participant, spouse, or Beneficiary. To the extent that any person acquires a right to receive payments hereunder, such rights are no greater than the right of an unsecured general creditor of the Company.
- 10.2 Rabbi Trust. The Company may, in its sole discretion, establish a grantor trust, commonly known as a rabbi trust, as a vehicle for accumulating assets to pay benefits

under the Plan. Payments under the Plan may be made from the general assets of the Company or from the assets of any such rabbi trust. Any such payment made shall reduce the obligation owed to the receiving Participant or Beneficiary under the Plan.

Article 11 *Claims*

- 11.1 Filing a Claim. Any controversy or claim arising out of or relating to the Plan shall be filed in writing with a committee designated by the Committee to resolve such controversies and claims (the “Claims Committee”), which shall make all determinations concerning such claim. Any claim filed with the Claims Committee and any decision by the Claims Committee denying such claim shall be in writing and shall be delivered to the Participant or Beneficiary filing the claim (the “Claimant”). Notice of a claim for payments shall be delivered to the Claims Committee within 90 days of the latest date upon which the payment could have been timely made in accordance with the terms of the Plan and Code Section 409A, and if not paid, the Participant or Beneficiary must file a claim under this Article 11 not later than 180 days after such latest date. If the Participant or Beneficiary fails to file a timely claim, the Participant or Beneficiary forfeits any amounts to which such Participant or Beneficiary may have been entitled to receive under the claim.
- (a) *In General*. Notice of a denial of benefits will be provided within 90 days of the Claims Committee’s receipt of the Claimant’s claim for benefits. If the Claims Committee determines that it needs additional time to review the claim, the Claims Committee will provide the Claimant with a notice of the extension before the end of the initial 90-day period. The extension will not be more than 90 days from the end of the initial 90-day period, and the notice of extension will explain the special circumstances that require the extension and the date by which the Claims Committee expects to make a decision.
- (b) *Contents of Notice*. If a claim for benefits is completely or partially denied, notice of such denial shall be in writing. Any electronic notification shall comply with the standards imposed by Department of Labor Regulation 29 CFR 2520.104b-1(c)(1)(i), (iii), and (iv). The notice of denial shall: (i) set forth the specific reasons for denial in plain language; (ii) cite the pertinent provisions of the Plan document; (iii) explain, where appropriate, how the Claimant can perfect the claim, including a description of any additional material or information necessary to complete the claim and why such material or information is necessary; and (iv) explain the claims review procedures and the time limits applicable to such procedures, including the right to appeal the decision, the deadline by which such appeal must be filed, and a statement of the Claimant’s right to bring a civil action under Section 502(a) of ERISA following an adverse decision on appeal and the specific date by which such a civil action must commence under Section 11.4.
- 11.2 Appeal of Denied Claims. A Claimant whose claim has been completely or partially denied shall be entitled to appeal the claim denial by filing a written appeal with a committee designated by the Committee to hear such appeals, which may be the Committee itself (the “Appeals Committee”). A Claimant who timely requests a review of the denied claim (or such Claimant’s authorized representative) may review, upon request and free of charge, copies of all documents, records, and other information relevant to the denial and may submit written comments, documents, records, and other information relating to the claim to the Appeals Committee. All written comments, documents, records, and other information shall be considered “relevant” if the information: (a) was relied upon in making a benefits determination; (b) was submitted,

considered, or generated in the course of making a benefits decision, regardless of whether it was relied upon to make the decision; or (c) demonstrates compliance with administrative processes and safeguards established for making benefit decisions. The review shall take into account all comments, documents, records, and other information submitted by the Claimant relating to the claim, without regard to whether such information was submitted or considered in the initial benefit determination. The Appeals Committee may, in its sole discretion and if it deems appropriate or necessary, decide to hold a hearing with respect to the claim appeal.

- (a) *In General.* Appeal of a denied benefits claim must be filed in writing with the Appeals Committee no later than 60 days after receipt of the written notification of such claim denial. The Appeals Committee shall make its decision regarding the merits of the denied claim within 60 days following receipt of the appeal (or within 120 days after such receipt, in a case where there are special circumstances requiring extension of time for reviewing the appealed claim). If an extension of time for reviewing the appeal is required because of special circumstances, written notice of the extension shall be furnished to the Claimant prior to the commencement of the extension. The notice will indicate the special circumstances requiring the extension of time and the date by which the Appeals Committee expects to render the determination on review. The review will take into account comments, documents, records, and other information submitted by the Claimant relating to the claim, without regard to whether such information was submitted or considered in the initial benefit determination.
- (b) *Contents of Notice.* If a benefits claim is completely or partially denied on review, notice of such denial shall be in writing. Any electronic notification shall comply with the standards imposed by Department of Labor Regulation 29 CFR 2520.104b-1(c)(1)(i), (iii), and (iv). Such notice shall set forth: (i) the reasons for denial in plain language; (ii) the specific reason or reasons for the denial; (iii) specific references to the pertinent Plan provisions on which the denial is based; (iv) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to and copies of all documents, records, or other information “relevant” (as described in Section 11.2) to the Claimant’s claim; and (v) a statement of the Claimant’s right to bring an action under Section 502(a) of ERISA, following an adverse decision on review and the specific date by which such a civil action must commence under Section 11.4.

- 11.3 Claims Appeals Upon Change in Control. Upon a Change in Control, the Appeals Committee, as constituted immediately prior to such Change in Control, shall continue to act as the Appeals Committee. The Company may not remove any member of the Appeals Committee but may replace resigning members if two-thirds of the members of the Board and a majority of Participants and Beneficiaries with Account Balances consent to the replacement.

The Appeals Committee shall have the exclusive authority at the appeals stage to interpret the terms of the Plan and resolve appeals under the Claims Procedure.

The Company shall: (a) pay all reasonable expenses and fees of the Appeals Committee; (b) indemnify the Appeals Committee (including individual committee members) against any costs, expenses, and liabilities, including attorneys’ fees and expenses arising in connection with the performance of the Appeals Committee hereunder, except with respect to matters resulting from the Appeals Committee’s gross negligence or willful misconduct; and (c) supply full and timely information to the Appeals Committee on all

matters related to the Plan, Participants, Beneficiaries, Accounts, and any rabbi trust as the Appeals Committee may reasonably require.

- 11.4 Legal Action. A Claimant may not bring any legal action, including commencement of any arbitration, relating to a claim for benefits under the Plan unless and until the Claimant has followed the claims procedures under the Plan and exhausted such Claimant's administrative remedies under Sections 11.1 and 11.2. No such legal action may be brought more than 12 months following the notice of denial of benefits under Section 11.2, or if no appeal is filed by the applicable appeals deadline, 12 months following the appeals deadline.

If a Participant or Beneficiary prevails in a legal proceeding brought under the Plan to enforce the rights of such Participant or Beneficiary or any similarly situated Participant or Beneficiary, in whole or in part, the Company shall reimburse such prevailing Participant or Beneficiary for all legal costs (including reasonable attorneys' fees) and reasonably documented (a) out-of-pocket expenses and (b) other liabilities incurred by such Participant or Beneficiary as a result of such proceedings.

- 11.5 Discretion of Appeals Committee. All interpretations, determinations, and decisions of the Appeals Committee with respect to any claim shall be made in its sole discretion and shall be final and conclusive.

11.6 Arbitration.

- (a) *Prior to Change in Control.* If, prior to a Change in Control, any claim or controversy between the Company and a Claimant is not resolved through the claims procedure set forth in Article 11, such claim shall be submitted to and resolved exclusively by expedited binding arbitration by a single arbitrator. Arbitration shall be conducted in accordance with the following procedures:

The complaining party shall promptly send written notice to the other party identifying the matter in dispute and the proposed remedy. Following the giving of such notice, the parties shall meet and attempt in good faith to resolve the matter. If the parties are unable to resolve the matter within 21 days, the parties shall meet and attempt in good faith to select a single arbitrator acceptable to both parties. If a single arbitrator is not selected by mutual consent within 10 Business Days following the giving of the written notice of dispute, an arbitrator shall be selected from a list of nine persons, each of whom shall be an attorney who is either engaged in the active practice of law or recognized arbitrator and who, in either event, is experienced in serving as an arbitrator in disputes between employers and employees, which list shall be provided by the main office of either JAMS, the American Arbitration Association ("AAA") or the Federal Mediation and Conciliation Service. If, within three Business Days of the parties' receipt of such list, the parties are unable to agree on an arbitrator from the list, then the parties shall each strike names alternatively from the list, with the first to strike being determined by the flip of a coin. After each party has had four strikes, the remaining name on the list shall be the arbitrator. If such person is unable to serve for any reason, the parties shall repeat this process until an arbitrator is selected.

Unless the parties agree otherwise, within 60 days of the selection of the arbitrator, a hearing shall be conducted before such arbitrator at a time and a place agreed upon by the parties. If the parties are unable to agree upon the time or place of the arbitration, the time and place shall be designated by the arbitrator

after consultation with the parties. Within 30 days of the conclusion of the arbitration hearing, the arbitrator shall issue an award, accompanied by a written decision explaining the basis for the arbitrator's award.

In any arbitration hereunder, the Company shall pay all administrative fees of the arbitration and all fees of the arbitrator. Each party shall pay its own attorneys' fees, costs, and expenses, unless the arbitrator orders otherwise. The arbitrator shall have no authority to add to or to modify this Plan, shall apply all applicable law, and shall have no lesser and no greater remedial authority than would a court of law resolving the same claim or controversy. The arbitrator shall, upon an appropriate motion, dismiss any claim without an evidentiary hearing if the party bringing the motion establishes that it would be entitled to summary judgment if the matter had been pursued in court litigation.

The parties shall be entitled to discovery as follows: (i) each party may take no more than three depositions; (ii) the Company may depose the Participant or Beneficiary plus two other witnesses; and (iii) the Participant or Beneficiary may depose the Company, pursuant to Rule 30(b)(6) of the Federal Rules of Civil Procedure, plus two other witnesses. Each party may make reasonable document discovery requests as are allowed in the discretion of the arbitrator.

The decision of the arbitrator shall be final, binding, and non-appealable and may be enforced as a final judgment in any court of competent jurisdiction.

This arbitration provision of the Plan shall extend to claims against any parent, subsidiary, or affiliate of each party and, when acting within such capacity, any officer, director, shareholder, Participant, Beneficiary, or agent of any party, or of any of the above, and shall apply to claims arising out of state and federal statutes and local ordinances as well as to claims arising under the common law or under this Plan.

Notwithstanding the foregoing, and unless otherwise agreed between the parties, either party may apply to a court for provisional relief, including a temporary restraining order or preliminary injunction, on the ground that the arbitration award to which the applicant may be entitled may be rendered ineffectual without provisional relief.

Any arbitration hereunder shall be conducted in accordance with the Federal Arbitration Act. However, in the event of any inconsistency between the rules and procedures of such Act and the terms of this Plan, the terms of this Plan shall prevail.

If any of the provisions of this Section 11.6(a) are determined to be unlawful or otherwise unenforceable, such determination shall not affect the validity of the remainder of this Section 11.6(a), and this Section 11.6(a) shall be reformed to the extent necessary to carry out its provisions to the greatest extent possible and to insure that the resolution of all conflicts between the parties, including those arising out of statutory claims, shall be resolved by neutral, binding arbitration. If a court finds that the provisions of this Section 11.6(a) are not absolutely binding, then the parties intend any arbitration decision and award to be fully admissible in evidence in any subsequent action, given great weight by any finder of fact, and treated as determinative to the maximum extent permitted by law.

The parties do not agree to arbitrate any putative class action or any other representative action. The parties agree to arbitrate claims only to the extent that they are brought by a single Participant or Beneficiary.

- (b) *Upon Change in Control.* Upon a Change in Control, Section 11.6(a) shall not apply, and any legal action initiated by a Participant or Beneficiary to enforce rights under the Plan may be brought in any court of competent jurisdiction. Notwithstanding the Appeals Committee's discretion under Sections 11.3 and 11.5, the court shall apply a de novo standard of review to any prior claims decision under Sections 11.1 through 11.3 or any other determination made by the Company, the Board, the Committee, or the Appeals Committee.

Article 12 *General Provisions*

- 12.1 Assignment. No interest of any Participant, spouse, or Beneficiary under this Plan and no benefit payable hereunder shall be assigned as security for a loan, and any such purported assignment shall be null, void, and of no effect, nor shall any such interest or any such benefit be subject in any manner, either voluntarily or involuntarily, to anticipation, sale, transfer, assignment, or encumbrance by or through any Participant, spouse, or Beneficiary. Notwithstanding anything to the contrary herein, the Committee has the discretion to make payments to an alternate payee in accordance with the terms of a "domestic relations order" (as defined in Code Section 414(p)(1)(B)).

Without the consent of any Participant or Beneficiary, the Company may assign any or all of its liabilities under this Plan in connection with any restructuring, recapitalization, sale of assets, Change in Control, or similar transaction affecting the Company.

- 12.2 No Legal or Equitable Rights or Interest. No Participant or other person shall have any legal or equitable rights or interest in this Plan that are not expressly granted in this Plan. Participation in this Plan does not give any person any right to be retained in the service of the Company or any Employer, and nothing contained herein shall be construed to constitute a contract of employment or other services between an Employee and the Company or an Employer. Nothing contained herein shall be construed as changing a Participant's status from employee to independent contractor or from independent contractor to employee. The Company makes no representations or warranties as to the tax consequences to any Participant or Beneficiary resulting from a deferral of income pursuant to the Plan.
- 12.3 Notices. All notices, requests, instructions, claims, demands, and other communications required or permitted to be given hereunder shall be effective: (a) if delivered personally, when received; (b) if sent by electronic mail or other electronic transmission, upon confirmation of receipt; (c) if mailed by registered or certified mail (postage prepaid, return receipt requested), two business days after being mailed; or (d) if sent by a nationally recognized overnight courier, upon the earlier of actual receipt and two business days after delivery against waybill, and shall be addressed as follows (or to any other address that a party indicates by a notice delivered to the other parties pursuant to this Section 12.3):

If to the Company:

Palo Alto Networks, Inc.
3000 Tannery Way
Santa Clara, CA 95054

If to a Participant or Beneficiary:

To the most recent address that the Company or the Employer has on file for the Participant

- 12.4 Headings. The headings of Sections are included solely for convenience of reference, and if there is any conflict between such headings and the text of this Plan, the text shall control.
- 12.5 Invalid or Unenforceable Provisions. If any provision of this Plan is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provisions hereof, and the Committee may elect in its sole discretion to construe such invalid or unenforceable provisions in a manner that conforms to applicable law or as if such provisions, to the extent invalid or unenforceable, had not been included.
- 12.6 Lost Participants or Beneficiaries. Any Participant or Beneficiary who is entitled to a benefit from the Plan has the duty to keep the Committee advised of such Participant or Beneficiary's current mailing address. If benefit payments are returned to the Plan or are not presented for payment after a reasonable amount of time, the Committee shall presume that the payee is missing. The Committee, after making efforts it deems reasonable and appropriate in its discretion to locate the payee, shall stop payment on any uncashed checks and may discontinue making future payments until contact with the payee is restored. If the Committee is unable to locate the Participant or Beneficiary after (a) the first anniversary of the date on which payment is to be made, then the Participant's Account will not be further credited with Earnings, and (b) the fifth anniversary of the date on which payment is scheduled to be made, then the Participant's Account will be forfeited. However, such forfeited Account shall thereafter be reinstated, without further adjustment for interest, if a valid claim is made by or on behalf of the Participant or Beneficiary for all or part of the forfeited Account.
- 12.7 Facility of Payment to a Minor. If a distribution is to be made to a minor, or to a person who is otherwise incompetent, then the Committee may, in its discretion, make such distribution to (a) the legal guardian or, if none, to a parent of a minor payee with whom the payee maintains a residence, or (b) the conservator or committee or, if none, to the person having custody of an incompetent payee. Any such distribution shall fully discharge the Committee, the Company, and the Plan from further liability on account thereof.
- 12.8 Successors and Assigns. This Plan shall inure to the benefit of and be binding upon the Company, each Participant, each Beneficiary, and their respective successors, executors, administrators, heirs, and permitted assigns.
- 12.9 Governing Law. To the extent not preempted by ERISA, the laws of the state of Delaware shall govern the construction and administration of the Plan.
- 12.10 Code Section 409A. This Plan is intended to be administered in compliance with Code Section 409A, and each provision of the Plan shall be interpreted consistent with Code Section 409A. Although intended to comply with Code Section 409A, this Plan shall not constitute a guarantee to any Participant or Beneficiary that the Plan in form or in operation will result in the deferral of federal or state income tax liabilities or that the Participant or Beneficiary will not be subject to the additional taxes imposed under Code Section 409A. The Company shall not have any legal obligation to a Participant with respect to taxes imposed under Code Section 409A.

**LIST OF SUBSIDIARIES
OF
PALO ALTO NETWORKS, INC.**

Name of Subsidiary	Jurisdiction of Incorporation
Palo Alto Networks (Australia) Pty Ltd	Australia
Sinefa Pty. Ltd.	Australia
Palo Alto Networks (Austria) GmbH	Austria
Palo Alto Networks Belgium B.V.B.A.	Belgium
Palo Alto Networks (Brasil) Ltda.	Brazil
Palo Alto Networks (Canada Technology), Inc.	Canada
Palo Alto Networks (Canada) Inc.	Canada
Palo Alto Networks (Shanghai) Co., Ltd.	China
PA Networks Costa Rica LLC SRL	Costa Rica
Palo Alto Networks (Czech) S.R.O.	Czechia
Palo Alto Networks Denmark ApS	Denmark
Palo Alto Networks (Finland) Oy	Finland
Palo Alto Networks (Germany) GmbH	Germany
Palo Alto Networks (Hungary) Kft	Hungary
Palo Alto Networks (India) Private Limited	India
Palo Alto Networks (India) Technologies Private Limited	India
Gammanet Solutions Private Limited	India
Palo Alto Security Limited	Ireland
Crusoe Security Limited	Israel
Palo Alto Networks (Israel Analytics) Ltd.	Israel
Palo Alto Networks (Israel Services) Ltd.	Israel
Palo Alto Networks (Israel) Ltd.	Israel
Twistlock Ltd.	Israel
BridgeCrew Technologies Ltd.	Israel
Palo Alto Networks (Italy) S.R.L	Italy
Palo Alto Networks K.K. (Kabushiki Kaisha)	Japan
Palo Alto Networks (Mexico) S. de R.L. de C.V.	Mexico
Palo Alto Networks (New Zealand) Unlimited	New Zealand
Palo Alto Networks (Norway) AS	Norway
Palo Alto Networks (Poland) sp. z o.o.	Poland
Palo Alto Networks (QFC) LLC	Qatar
Palo Alto Networks (Rus) LLC	Russia
Palo Alto Networks Korea, Ltd. - Yuhan Hoesa (YH)	S. Korea
Palo Alto Networks Saudi Arabia LLC	Saudi Arabia
Palo Alto Networks (Singapore) Holding Company Pte. Ltd.	Singapore
Palo Alto Networks (Singapore) PTE. LTD.	Singapore
Palo Alto Networks (South Africa) (Pty) Ltd.	South Africa
Palo Alto Networks (Iberia), S.L.	Spain
Palo Alto Networks (Switzerland) GmbH	Switzerland
Palo Alto Networks (EU) B.V.	The Netherlands
Palo Alto Networks (GEO) B.V.	The Netherlands
Palo Alto Networks (Netherlands) B.V.	The Netherlands
Palo Alto Networks (APAC Holdings) B.V.	The Netherlands
Palo Alto Networks Holdings B.V.	The Netherlands
Palo Alto Networks FZ LLC	United Arab Emirates
Palo Alto Networks FS International Limited	United Kingdom
Palo Alto Networks (UK Holding 1) Limited	United Kingdom
Palo Alto Networks (UK Holding 2) Limited	United Kingdom
Palo Alto Networks (UK) Limited	United Kingdom
3375 Scott Blvd LLC	Delaware
Aporeto, Inc.	Delaware
Evident.io LLC	Delaware
LightCyber, Inc.	Delaware
Palo Alto Networks (Malaysia), LLC	Delaware
Palo Alto Networks Financial Services, LLC	Delaware

Palo Alto Networks International, Inc.	Delaware
Palo Alto Networks Management, LLC	Delaware
Palo Alto Networks Public Sector, LLC	Delaware
Palo Alto Networks Venture Fund, LLC	Delaware
Palo Alto Networks, L.L.C.	Delaware
PAN Demisto LLC	Delaware
PAN II LLC	Delaware
PAN LLC	Delaware
PureSec, Inc.	Delaware
RedLock, LLC	Delaware
SecDo, Inc.	Delaware
Twistlock, Inc.	Delaware
Zingbox, Inc.	Delaware
CloudGenix, Inc.	Delaware
BridgeCrew LLC	Delaware
Sinefa Inc.	Delaware
Sinefa Group, LLC	Delaware
Expanse LLC	Delaware
Expanse Holding Company LLC	Delaware
Crypsis Digital Security, LLC	Virginia
Crypsis Group Holdings, LLC	Virginia
3408 Garrett Drive LLC	Delaware

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-3 No. 333-227324) of Palo Alto Networks, Inc.,
- (2) Registration Statement (Form S-8 No. 333-182762) pertaining to the 2005 Equity Incentive Plan, 2012 Equity Incentive Plan and the 2012 Employee Stock Purchase Plan of Palo Alto Networks, Inc.,
- (3) Registration Statements (Form S-8 No. 333-191340, 333-198859, 333-207003, 333-213547, 333-220383, 333-227322, 333-233689, and 333-248626) pertaining to the 2012 Equity Incentive Plan and the 2012 Employee Stock Purchase Plan of Palo Alto Networks, Inc.,
- (4) Registration Statement (Form S-8 No. 333-227901) pertaining to the RedLock Inc. 2015 Stock Plan,
- (5) Registration Statement (Form S-8 No. 333-230663) pertaining to the Demisto, Inc. 2015 Stock Option Plan,
- (6) Registration Statement (Form S-8 No. 333-232672) pertaining to the Twistlock Ltd. Amended and Restated 2015 Share Option Plan,
- (7) Registration Statement (Form S-8 No. 333-234059) pertaining to the Zingbox, Inc. Stock Incentive Plan,
- (8) Registration Statement (Form S-8 No. 333-235854) pertaining to the Aporeto, Inc. Amended and Restated 2015 Stock Option and Grant Plan,
- (9) Registration Statement (Form S-8 No. 333-238014) pertaining to the CloudGenix Inc. 2013 Equity Incentive Plan;
- (10) Registration Statement (Form S-8 No. 333-249387) pertaining to the Crypsis Group Holdings, LLC 2017 Equity Incentive Plan,
- (11) Registration Statement (Form S-8 No. 333-251423) pertaining to the Sinefa Group, Inc. 2020 Stock Plan,
- (12) Registration Statement (Form S-8 No. 333-251425) pertaining to the Expanse Holding Company, Inc. Amended and restated 2012 Stock Incentive Plan, and
- (13) Registration Statement (Form S-8 No. 333-254042) pertaining to the Bridgecrew, Inc. 2019 Stock Incentive Plan;

of our reports dated September 6, 2022, with respect to the consolidated financial statements of Palo Alto Networks, Inc. and the effectiveness of internal control over financial reporting of Palo Alto Networks, Inc. included in this Annual Report (Form 10-K) of Palo Alto Networks, Inc. for the year ended July 31, 2022.

/s/ Ernst & Young LLP

San Jose, California
September 6, 2022

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

I, Nikesh Arora, certify that:

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

Nikesh Arora
Chief Executive Officer and Director

Date: September 6, 2022

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

I, Dipak Golechha, certify that:

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

/s/ DIPAK GOLECHHA

Dipak Golechha
Chief Financial Officer

Date: September 6, 2022

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

I, Nikesh Arora, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K of Palo Alto Networks, Inc. for the fiscal year ended July 31, 2022, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in such Annual Report on Form 10-K fairly presents, in all material respects, the financial condition and results of operations of Palo Alto Networks, Inc.

/s/ NIKESH ARORA

Nikesh Arora
Chief Executive Officer and Director

Date: September 6, 2022

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

I, Dipak Golechha, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K of Palo Alto Networks, Inc. for the fiscal year ended July 31, 2022, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in such Annual Report on Form 10-K fairly presents, in all material respects, the financial condition and results of operations of Palo Alto Networks, Inc.

/s/ DIPAK GOLECHHA

Dipak Golechha
Chief Financial Officer

Date: September 6, 2022