

VMWARE, INC.

FORM 10-K (Annual Report)

Filed 03/29/18 for the Period Ending 02/02/18

Address	3401 HILLVIEW AVENUE PALO ALTO, CA, 94304
Telephone	(650) 427-5000
CIK	0001124610
Symbol	VMW
SIC Code	7372 - Services-Prepackaged Software
Industry	IT Services & Consulting
Sector	Technology
Fiscal Year	01/31

**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 February 2, 2018

OR

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

For the transition period from to

Commission File Number 001-33622

VMWARE, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

94-3292913
(I.R.S. Employer
Identification Number)

3401 Hillview Avenue
Palo Alto, CA
(Address of principal executive offices)

94304
(Zip Code)

(650) 427-5000
(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
Class A Common Stock, par value \$0.01	New York Stock Exchange

Securities registered pursuant to section 12(g) of the Act:
None

Indicate by a 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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"/>	(Do not check if a smaller reporting company)	
Emerging growth company	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>

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

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

At August 4, 2017, the aggregate market value of the registrant's Class A common stock held by non-affiliates of the registrant (based upon the closing sale price of such shares on the New York Stock Exchange on August 4, 2017) was approximately \$7,052,590,001. Shares of the registrant's Class A common stock and Class B common stock held by each executive officer and director and by each entity or person, other than investment companies, that, to the registrant's knowledge, owned 5% or more of the registrant's outstanding Class A common stock as of August 4, 2017 have been excluded in that such persons may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 20, 2018, the number of shares of common stock, par value \$0.01 per share, of the registrant outstanding was 405,290,870, of which 105,290,870 shares were Class A

common stock and 300,000,000 were Class B common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Information required in response to Part III of Form 10-K (Items 10, 11, 12, 13 and 14) is hereby incorporated by reference to portions of the registrant's Proxy Statement for the Annual Meeting of Stockholders to be held in 2018. The Proxy Statement will be filed by the registrant with the Securities and Exchange Commission no later than 120 days after the end of the registrant's fiscal year ended February 2, 2018 .

TABLE OF CONTENTS

	Page
PART I	
Item 1. <u>Business</u>	<u>4</u>
Item 1A. <u>Risk Factors</u>	<u>13</u>
Item 1B. <u>Unresolved Staff Comments</u>	<u>32</u>
Item 2. <u>Properties</u>	<u>33</u>
Item 3. <u>Legal Proceedings</u>	<u>33</u>
Item 4. <u>Mine Safety Disclosures</u>	<u>33</u>
PART II	
Item 5. <u>Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	<u>34</u>
Item 6. <u>Selected Financial Data</u>	<u>36</u>
Item 7. <u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>37</u>
Item 7A. <u>Quantitative and Qualitative Disclosures About Market Risk</u>	<u>55</u>
Item 8. <u>Financial Statements and Supplementary Data</u>	<u>57</u>
Item 9. <u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	<u>100</u>
Item 9A. <u>Controls and Procedures</u>	<u>100</u>
Item 9B. <u>Other Information</u>	<u>101</u>
PART III	
Item 10. <u>Directors, Executive Officers and Corporate Governance</u>	<u>102</u>
Item 11. <u>Executive Compensation</u>	<u>102</u>
Item 12. <u>Security Ownership of Certain Beneficial Owners and Management, and Related Stockholder Matters</u>	<u>102</u>
Item 13. <u>Certain Relationships and Related Transactions, and Director Independence</u>	<u>102</u>
Item 14. <u>Principal Accounting Fees and Services</u>	<u>102</u>
PART IV	
Item 15. <u>Exhibits, Financial Statement Schedules</u>	<u>103</u>
Item 16. <u>Form 10-K Summary</u>	<u>105</u>
<u>Signatures</u>	<u>106</u>

VMware, vSphere, vCloud, vCloud Suite, vSphere with Operations Management, VMware vSAN, vSAN, vCenter, vCenter Site Recovery Manager, NSX, AppDefense, VeloCloud, VMware Cloud Foundation, vRealize, vRealize Operations, vRealize Automation, vRealize Suite, vCloud NFV, Pulse, Pulse IoT Center, AirWatch, Photon, Photon OS, Horizon, Workspace ONE, VMware Partner Network, VMworld, vFabric, and VMware View are registered trademarks or trademarks of VMware or its subsidiaries in the United States and other jurisdictions. All other marks and names mentioned herein may be trademarks of their respective companies.

Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements. All statements other than statements of historical fact could be deemed forward-looking statements, and words such as “expect,” “anticipate,” “target,” “goal,” “project,” “intent,” “plan,” “believe,” “momentum,” “seek,” “estimate,” “continue,” “potential,” “future,” “endeavor,” “will,” “may,” “should,” “could,” “depend,” “predict,” and variations or the negative expression of such words and similar expressions are intended to identify forward-looking statements. Forward-looking statements in this report include statements relating to expected industry trends and conditions; future financial performance, trends or plans; anticipated impacts of developments in accounting rules and tax laws and rates; VMware’s expectations regarding the timing of tax payments; plans for and anticipated benefits of VMware products, services and solutions and partner and alliance relationships; plans for and anticipated benefits of corporate transaction, acquisitions, stock repurchases and investment activities; the outcome or impact of pending litigation, claims or disputes; and any statements of assumptions underlying any of the foregoing. These statements are based on current expectations about the industries in which VMware operates and the beliefs and assumptions of management. These forward-looking statements involve risks and uncertainties and the cautionary statements set forth above and those contained in the section of this report entitled “Risk Factors” identify important factors that could cause actual results to differ materially from those predicted in any such forward-looking statements. All forward-looking statements in this document are made as of the date hereof, based on information available to us as of the date hereof. We assume no obligation to, and do not currently intend to, update these forward-looking statements.

PART I

ITEM 1. BUSINESS

Overview

VMware, Inc. (“VMware”) pioneered the development and application of virtualization technologies with x86 server-based computing, separating application software from the underlying hardware. Information technology (“IT”) driven innovation is disrupting markets and industries. Technologies emerge faster than organizations can absorb, creating increasingly complex environments. To take on this challenge, businesses need a flexible and secure digital foundation. We provide compute, cloud, mobility, networking and security infrastructure software to businesses that provides a flexible digital foundation for the applications that empower businesses to serve their customers globally.

We continue to broaden our product and solution offerings beyond compute virtualization to include offerings that allow organizations to manage IT resources across private clouds and complex multi-cloud, multi-device environments by leveraging synergies across three categories: Software-Defined Data Center (“SDDC”), Hybrid Cloud Computing and End-User Computing (“EUC”). Our portfolio supports and addresses the four key IT priorities of our customers: modernizing data centers, integrating public clouds, empowering digital workspaces and transforming security. We create solutions that enable the digital transformation our customers need as they ready their applications, infrastructure and devices for their future business needs.

We incorporated in Delaware in 1998, were acquired by EMC Corporation (“EMC”) in 2004 and conducted our initial public offering of our Class A common stock in August 2007. Effective September 7, 2016, Dell Technologies Inc. (“Dell”) acquired EMC. As a result, EMC became a wholly-owned subsidiary of Dell, and VMware became an indirectly-held, majority-owned subsidiary of Dell. We are considered a “controlled company” under the rules of the New York Stock Exchange. As of February 2, 2018, Dell controlled approximately 81.9% of our outstanding common stock, including 31 million shares of our Class A common stock and all of our Class B common stock.

Effective January 1, 2017, our fiscal year changed from a fiscal year ending on December 31 of each calendar year to a fiscal year consisting of a 52- or 53-week period ending on the Friday nearest to January 31 of each year. The period that began on January 1, 2017 and ended on February 3, 2017 is reflected as a transition period (the “Transition Period”). Our first full fiscal year under the revised fiscal calendar began on February 4, 2017 and ended on February 2, 2018. We refer to our fiscal years ended February 1, 2019, February 2, 2018 and December 31, 2016 as “fiscal 2019,” “fiscal 2018” and “fiscal 2016,” respectively.

Total revenue in fiscal 2018 increased 12% to \$7,922 million. Total revenue is comprised of license revenue of \$3,195 million and services revenue of \$4,727 million. While sales of our VMware vSphere (“vSphere”) product have remained strong, the majority of our license sales originate from solutions across our broad portfolio beyond our compute products.

We operate in one reportable operating segment, thus all required financial segment information can be found in our consolidated financial statements. For financial information on our business, including by geography, refer to Note P to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Our corporate headquarters are located at 3401 Hillview Avenue, Palo Alto, California, and we have 117 offices worldwide.

Products and Technology Solutions

Software-Defined Data Center

We were the first company to articulate a vision for SDDC, whereby increasingly infrastructure is virtualized and delivered as a service, enabling data center management to be entirely automated by software, from one unified platform. Traditional data centers are collections of technology silos where each application type has its own vertical stack consisting of a CPU and operating system, storage pool, networking and security, and management systems. Over time, costs to maintain the data center infrastructure have been increasing because the data center environment has become more heterogeneous, leading to higher complexity. The increasing complexity of the data center demands constantly increasing resources to manage and maintain the IT infrastructure. SDDC is designed to transform and modernize the data center into an on-demand service that addresses application requirements by abstracting, pooling and automating the services that are required from the underlying hardware. SDDC dramatically simplifies data center operations and lower costs.

Our SDDC architecture consists of four main product categories:

- Compute
- Storage and Availability
- Network and Security
- Cloud Management and Automation

Compute

vSphere, our flagship data center platform, provides the fundamental compute layer for VMware environments. A “hypervisor” is a layer of software that resides between the operating system and system hardware to enable compute virtualization. Users deploy the vSphere hypervisor when they purchase vSphere, Cloud Foundation or suite versions that include vSphere, such as VMware vCloud Suite and vSphere with Operations Management (“vSOM”).

We have continued to develop vSphere solutions to be compatible with new technologies and tools utilized by software developers and enterprises. During fiscal 2016, we introduced our VMware vSphere Integrated Containers solution that allows customers to deploy containerized and traditional applications side-by-side on a common platform, without re-architecting their existing infrastructure. During fiscal 2018, we expanded our container solutions by announcing Pivotal Container Services (“PKS”), a new jointly developed, marketed, sold and supported Kubernetes container solution with Pivotal Software, Inc. (“Pivotal”), an indirect majority-owned subsidiary of Dell, and in which VMware has an ownership interest.

Storage and Availability

We provide many storage and availability products to offer cost-effective, holistic data storage and protection options to all applications running on the vSphere platform. These products serve as hyper-converged infrastructure solutions designed to enable customers to deploy a broad range of hardware solutions. Key hyper-converged infrastructure solutions in this area include:

- **VMware vSAN (“vSAN”)**— clusters server disks to create radically simple, shared storage designed for virtual machines.
- **VxRail**— a fully integrated and pre-configured Dell EMC Appliance powered by vSAN and vSphere software that extends the VMware environment.
- **vSphere Replication**— provides a cost-efficient and simple way to manage replication.
- **vCenter Site Recovery Manager**— leverages vSphere and vSphere Replication to protect applications against site failures and to streamline planned migrations.

We experienced growth in both customer count and sales of our vSAN offerings during fiscal 2018.

Network and Security

Our network virtualization solution, VMware NSX (“NSX”), abstracts physical networks and greatly simplifies the provisioning and consumption of networking resources. In addition, our security services are built-in, do not require purpose-built hardware and can scale with the network. AppDefense and Network Insight further broaden our network and security portfolio. AppDefense is a data center endpoint security product that protects applications running in virtualized environments. Network Insight delivers intelligent operations for software defined networking and security across virtual, physical and multi-cloud environments.

During the fourth quarter of fiscal 2018, we acquired Velocloud Networks, Inc. (“Velocloud”), the market leader in cloud-delivered SD-WAN that enables enterprises and service providers to deploy flexible and secure WAN connectivity.

VMware networking and security services enable our customers to connect, secure and operate their network consistently from the data center to the cloud and to the edges of their network. This includes providing networking and security capabilities to virtual machines, containers and public cloud workloads. NSX integrates with many automation, security and container solutions and is an integral part of our key offerings including VMware Cloud Foundation, VMware Cloud on AWS and PKS.

Cloud Management and Automation

Our cloud management and automation products move beyond core compute infrastructure to manage and automate overarching IT processes involved in provisioning IT services and resources to users from initial infrastructure deployment to retirement. These IT processes manage virtualized and non-virtualized infrastructure resources and private and public cloud infrastructures, including hybrid cloud services. Examples of products in the cloud management and automation product portfolio include:

- **vRealize Operations**— provides performance, capacity and configuration management for virtual or physical infrastructure.
- **vRealize Automation**— enables customers to rapidly deploy and provision cloud services.

- **vRealize Business**— provides transparency and control over the costs and quality of IT services.

We acquired Wavefront, Inc. (“Wavefront”) during fiscal 2018 to enhance our cloud management and Software-as-a-Service (“SaaS”) portfolio. Wavefront by VMware is a SaaS-based metrics monitoring and analytics platform for modern cloud-native applications.

Software-Defined Data Center Suites

Our SDDC products are available separately or our compute and management and automation products may be acquired as part of a broader offering. The VMware vCloud Suite, vSOM and VMware vRealize Suite are packaged solutions for building and managing a complete cloud infrastructure optimized for use with the vSphere platform:

- **VMware vCloud Suite**— an integrated offering that brings together our vSphere hypervisor and our vRealize Suite multi-vendor hybrid cloud management platform.
- **vSOM**— allows users to optimize capacity and monitor the workload performance of their vSphere environments.
- **VMware vRealize Suite**— an enterprise-ready cloud management platform that enables customers to manage heterogeneous, hybrid cloud environments.

Software-Defined Data Center Platform — On Premise

During fiscal 2016, we introduced VMware Cloud Foundation, a unified platform that brings together our compute, storage and networking technologies into a natively integrated stack that delivers enterprise-ready cloud infrastructure for private and public clouds. The combined offering includes lifecycle management capabilities to span the full stack. SDDC products can also be delivered through our VMware vCloud NFV, which is a fully integrated, modular, multi-tenant network functions virtualization (“NFV”) platform. It provides the compute, storage, networking and operations management and service assurance capabilities to enable operators to provide virtualized network services and drive NFV deployments with an architecture that will support 5G and Internet of Things (“IoT”) services in the future.

During fiscal 2018, we introduced VMware Pulse IoT Center, an IoT device management and monitoring solution that helps both IT and Operational Technology (“OT”) organizations to onboard, manage, monitor and secure their IoT use cases from the edge to the cloud. This new solution has been built to meet the needs of IoT for both IT and OT teams, while supporting a broad range of edge systems and their connected devices.

Hybrid Cloud Computing

Our cross-cloud architecture enables consistent deployment models, security policies, visibility and governance for all applications, running on-premises and off-premises, regardless of the underlying cloud, hardware platform or hypervisor. It builds on our private and hybrid cloud capabilities by offering customers the freedom to innovate in multiple clouds, and is delivered through Cloud Foundation, the VMware vRealize cloud management platform and a new set of VMware Cloud Services that we are developing. Our overarching cloud strategy contains three key components: (i) continue to expand beyond compute virtualization in the private cloud, (ii) extend the private cloud into the public cloud and (iii) connect and secure endpoints across a range of public clouds. Our cloud strategy is designed to provide organizations with solutions that work across all clouds and all devices.

VMware Cloud Provider Program Services

We currently enable our customers to utilize off-premises, vSphere-based hybrid cloud computing capacity through our VMware Cloud Provider Program (“VCP”) offering (previously referred to as VMware vCloud Air Network). Our VCP offering, a key component of our strategic priority to integrate with public clouds, is a global ecosystem of over 4,000 cloud providers in more than 100 countries providing VMware-based cloud services. Our VCP offering is directed at hosting and cloud computing vendors, enabling organizations to choose between running applications in virtual machines on their own private clouds inside their data center or on public clouds hosted by a service provider.

Hybrid VMware Cloud Foundation

VMware Cloud Foundation can be used for on-premises private clouds and also can be extended to hybrid cloud environments using VMware Cloud on AWS or VCP. VMware Cloud on AWS, which became available in fiscal 2018, is an on-demand service that enables customers to run applications across vSphere-based cloud environments and provides access to a broad range of AWS services. This hybrid offering, a strategic alliance with AWS, integrates vSphere, vSAN and NSX along with VMware vCenter management and is optimized to run on dedicated, elastic, bare-metal AWS infrastructure. VMware Cloud on AWS is currently available in certain geographies, and we expect to continue expanding into additional regions in fiscal 2019.

VMware Cloud Foundation is also offered as a service platform to a global ecosystem of service providers through a select number of our VCP partners. For example, IBM, OVH and Rackspace are VCP partners who leverage our SDDC

technologies to create cloud services addressing the needs of customers around the world. IBM was our first VCPP partner to offer VMware Cloud Foundation as a service, which enables their customers to leverage our SDDC technologies on IBM's Cloud in their worldwide cloud data centers.

VMware Cloud Services

VMware Cloud Services are new SaaS offerings that enable visibility into cloud usage and costs, enhance consistent networking and security policies and automate the deployment, management and migration of applications and data across vSphere and non-vSphere private and public clouds. VMware Cloud Services include discovery and analytics, compliance and security, networking and deployment and migration. VMware Cloud Services enable our customers to run, manage, connect and secure their applications across private and public clouds, including AWS, Azure, Google Cloud Platform and IBM Cloud, as well as all devices in a common operating environment, regardless whether the underlying infrastructure is VMware-based.

End-User Computing

Our EUC portfolio offers a digital workspace to enable our customers to securely deliver access to applications and data for their end users from any device of the user's choice and from any location. Our EUC solutions are designed to optimize simplicity and choice for end users, while providing security and control to corporate IT organizations. IT organizations are able to enhance their enterprise security for corporate applications, data and endpoints utilizing our EUC solutions.

Our complete EUC solution consists of VMware Workspace ONE ("Workspace ONE"), our digital workspace platform. Workspace ONE is an integrated platform that securely delivers and manages any application, including legacy applications, on any device by integrating access control, application management and multi-platform endpoint management. Workspace ONE is powered by VMware AirWatch ("AirWatch"), which delivers unified endpoint management, and VMware Horizon ("Horizon") application and desktop virtualization, tied together with a common access control layer:

- **AirWatch**— a unified endpoint management platform built to manage and secure endpoints across all major operating systems from a single management console, enabling deployment of native, web or remote applications through an application catalog across every device with built-in single sign-on. It provides the core foundation to support an increasingly mobile workforce and customer base, enabling customers to take advantage of "bring your own device" initiatives.
- **Horizon**— a virtual platform that provides a streamlined approach to delivering, protecting and managing virtual desktops and applications from one digital workspace, while containing costs and allowing end users to work anytime, anywhere and across any device.

While AirWatch and Horizon are also offered separately, together this solution provides customers with a complete digital workspace solution that combines identity, mobile management, and application and desktop virtualization solutions. These technologies leverage our SDDC solutions, allowing customers to extend the value of virtualization and management from their data center to their devices. While many of these technologies are in use today, they are often deployed in silos across enterprise IT. Workspace ONE, which is offered as both an on-premises installed platform or as-a-service, integrates these silos to streamline the delivery of new applications and experiences. Workspace ONE continued to be our primary growth driver within EUC during fiscal 2018 .

As we continue to expand our virtual desktop offering, we plan to offer customers the opportunity to run virtual desktops as-a-service through multiple environments including the Azure platform.

Technology Alliances

We have more than 1,000 technology partners with whom we bring joint offerings to the marketplace and over 4,000 active service provider partners. We classify our partners as follows:

Independent Hardware Vendors ("IHVs") We have established relationships with large system vendors, including Cisco, Fujitsu, HPE, IBM, Lenovo and NEC for joint certification and co-development, and we continue to work closely with Dell. We also work closely with AMD, Intel and other IHVs to provide input on product development to enable them to deliver hardware advancements that benefit virtualization users. We coordinate with the leading storage and networking vendors to ensure joint interoperability and enable our software to access their differentiated functionality.

Independent Software Vendors ("ISVs") We partner with leading systems management, infrastructure software and application software vendors-including healthcare, telecom, finance and retail leaders to deliver value-added products that integrate with our products.

VMware Service Providers We have established partnerships with over 4,000 active VCPP service providers including CenturyLink, Fujitsu, IBM, KPN, Macquarie, Navisite, NTT, OVH, Rackspace, Softbank, Telefonica, Tieto, T-Systems, UOL Diveo and Virtustream, to enable them to host and deliver enterprise-class hybrid clouds as a way for enterprises to extend their data centers to external clouds, while preserving security, compliance and quality of service.

In addition to our base of active service provider partnerships, our strategic alliance with AWS to build and deliver an integrated hybrid offering, VMware Cloud on AWS, enables customers to run applications across vSphere-based private, public and hybrid cloud environments. VMware Cloud on AWS became available in fiscal 2018.

Our Technology Alliance Partner program facilitates joint solution creation and coordinated go-to-market activities with our partners. Over 4,600 of the most widely used applications from ISVs support the vSphere platform. These applications include business solutions for enterprise resource planning, human resource management, electronic medical records management, financial processing and middleware, such as application servers and databases.

Our ISVs and other alliance partners, developers and additional VMware community members continue to distribute software applications as virtual appliances. We invest significant capital in testing and certification of infrastructure to rigorously ensure our software is compatible with major hardware and software products.

Research and Development

We have made, and expect to continue to make, significant investments in research and development (“R&D”). We have assembled an experienced group of developers with systems management, public and private cloud, desktop, digital mobility, security, applications, software-as-a-service, networking, storage and open source software expertise. We also have strong ties to leading academic institutions around the world, and we invest in joint research with academia.

We prioritize our product development efforts through a combination of engineering-driven innovation and customer- and market-driven feedback. Our R&D culture places a high value on innovation, quality and open collaboration with our partners. We currently participate in numerous standards groups, and VMware employees hold a variety of standards organization leadership positions.

Our R&D expenses totaled \$1,755 million, \$1,503 million, \$1,300 million and \$150 million during the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period, respectively. We continue to invest in our key growth products, including NSX and vSAN, while also investing in areas that we expect to be significant growth drivers in future periods.

Sales and Marketing

We have a highly leveraged go-to-market strategy that includes a direct sales force, including a specialist sales force for our key growth products, and our channel partners.

We have established ongoing business relationships with our distributors. Our distributors purchase software licenses and software support from us for resale to end-user customers via resellers. These resellers are part of our VMware Partner Network (“VPN”), which offers resellers pricing incentives, rebates, sales and product training through the VMware Partner Central Web portal, and access to the worldwide network of VMware distributors. In addition, our channel partner network includes certain systems integrators and resellers trained and certified to deliver consulting services and solutions leveraging our products.

We generally do not have long-term contracts or minimum purchase commitments with our distributors, resellers, system vendors and systems integrators, and our contracts with these channel partners do not prohibit them from offering products or services that compete with ours.

End users can obtain licenses to our products through discrete purchases to meet their immediate needs or through the adoption of enterprise agreements (“EAs”). EAs are comprehensive volume license offerings that provide for multi-year maintenance and support at negotiated prices. EAs enable us to build long-term relationships with our customers as they commit to our virtual infrastructure solutions in their data centers. Our sales cycle can vary greatly depending on numerous factors, including the size and complexity of the proposed offering and customer’s infrastructure footprint.

In establishing list prices for our products, we take into account, among other numerous factors, the value our products and solutions deliver and the cost of alternative virtualization, end-user computing and hardware solutions.

Our marketing efforts focus on communicating the benefits of our solutions and educating our customers, distributors, resellers, system vendors, systems integrators, the media and analysts about the advantages of our innovative virtualization technology, cloud services and digital workspace solutions. We raise awareness of our company and brands, market our products and generate sales leads through VMware and industry events, public relations efforts, marketing materials, advertising, direct marketing, social media initiatives, free downloads and our website. We have invested in multiple online communities that enable customers and partners to share and discuss sales and development resources, best practices implementation and industry trends among other topics. Our annual user conference, VMworld, is held in both the United States (“U.S.”) and Europe, while our vForum events are held in the Asia Pacific and Japan region. We also offer management presentations, seminars and webinars on our products of virtualization, end-user computing and cloud services. We believe the combination of these activities strengthens our brand and enhances our leading positions in our industry.

During fiscal 2018, we continued joint marketing, sales, branding and product development efforts with Dell and other Dell Technologies companies to enhance the collective value we deliver to our mutual customers. As a result of these joint efforts, we have experienced significant synergies with Dell benefiting our sales during fiscal 2018. We also have strategic partnerships with AWS and IBM to jointly provide the expertise, solutions and go-to-market capabilities to help our customers efficiently and securely extend their proven software-defined solutions into public clouds, utilizing the tools and processes with which our customers are already familiar.

Our business is subject to seasonality in the sale of our products and services. For example, our fourth quarter revenue is affected by a number of seasonal factors, including year-end spending trends which impact the timing of renewals of our EAs and support and maintenance contracts.

Backlog

Backlog is comprised of unfulfilled orders against purchase orders or executed agreements received at the end of the period and is presented net of related estimated rebates and marketing development funds. As of February 2, 2018, our total backlog was approximately \$285 million, generally consisting of licenses, maintenance and services. Our backlog related to licenses was approximately \$99 million, which we expect to deliver and recognize as revenue during the first quarter or fiscal 2019. As of December 31, 2016, total backlog was approximately \$78 million and backlog related to licenses was approximately \$27 million. We do not believe that the amount of backlog, as of any particular date, is indicative of future sales.

Customers

Our product offerings allow customers to manage IT resources across private clouds and complex multi-cloud, multi-device environments. Customer deployments range in size from a single virtualized server for small businesses to thousands of virtual machines and managed devices for our largest enterprise customers.

During fiscal 2018, three distributors, who purchased software licenses and software support from us for resale to end-user customers directly or via resellers, each accounted for over 10% of our consolidated revenue. Arrow Electronics, Inc., Tech Data Corporation and Ingram Micro, Inc. accounted for 15%, 11% and 10%, respectively, of our consolidated revenue in fiscal 2018. Our distribution agreements are typically terminable at will by either party upon 30 to 90 days' prior written notice to the other party, and neither party has any obligation to purchase or sell any products under the agreement.

During fiscal 2018, revenue from Dell, including purchases of products and services directly from us, as well as through our channel partners, accounted for 17% of our consolidated revenue.

Competition

We face intense competition across all markets for our products and services. We believe that the key factors in our ability to successfully compete include the level of reliability, interoperability and new functionality of our product and service offerings; the ability of our product offerings to support multiple hardware platforms, operating systems, applications frameworks and public cloud platforms; our ability to anticipate customer needs in rapidly evolving markets for IT resources; the pricing of our product and service offerings; the ability to integrate open source technologies that are critical in private and public cloud computing architectures; the ability to attract and retain key employees; and the ability to maintain and expand our ecosystem of technology partners, service providers and sales channel partners. While we believe that we are a technology leader in virtualization and cloud infrastructure solutions and have a strong, favorable image with our customers, many of our current or potential competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, technical, sales, marketing and other resources than we do. Additionally, the adoption of public cloud, micro-services, containers and open source technologies has the potential to erode our profitability.

We face competition from, among others:

Providers of public cloud infrastructure and SaaS-based offerings. As businesses increasingly utilize public cloud and SaaS-based offerings, they are building more of their new compute workloads off-premises and may also shift some of their existing workloads. As a result, the demand for on-premises IT resources is expected to slow, and our products and services will need to increasingly compete for customers' IT workloads with off-premises public cloud and SaaS-based offerings. If our private, hybrid and public cloud products and services fail to address evolving customer requirements, the demand for our virtualization products and services may decline, and we could experience lower growth. Additionally, VCPP offerings from our partners may compete directly with infrastructure-as-a-service ("IaaS") offerings from various public cloud providers such as AWS and Microsoft. In fiscal 2018, we made VMware Cloud on AWS, a strategic alliance with AWS to deliver a vSphere-based cloud service running in AWS data centers, available in certain geographies. Our strategic alliance with Amazon may also be seen as competitive with VCPP offerings and adversely affect our relationship with VCPP partners, while some VCPP partners may elect to include VMware Cloud on AWS as part of their managed services provider offerings.

Large, diversified enterprise software and hardware companies. These competitors supply a wide variety of products and services to, and have well-established relationships with, our current and prospective end users. For example, small- to

medium-sized businesses and companies in emerging markets that are evaluating the adoption of virtualization-based technologies and solutions may be inclined to consider Microsoft solutions because of their existing use of Windows and Office products. Some of these competitors have in the past and may in the future take advantage of their existing relationships to engage in business practices that make our products and services less attractive to our end users. Other competitors have limited or denied support for their applications running in VMware virtualization environments. In addition, these competitors could integrate competitive capabilities into their existing products and services and make them available without additional charge. For example, Oracle provides free server virtualization software intended to support Oracle and non-Oracle applications, Microsoft offers its own server, network, and storage virtualization software packaged with its Windows Server product, as well as built-in virtualization in the client version of Windows and Cisco includes network virtualization technology in many of their data center networking platforms. As a result, existing and prospective VMware customers may elect to use products that are perceived to be “free” or “very low cost” instead of purchasing VMware products and services for certain applications where they do not believe that more advanced and robust capabilities are required.

Companies offering competing platforms based on open source technologies. Open source technologies for virtualization, containerization and cloud platforms such as Xen, KVM, Docker, Rocket, OpenStack, Mesos, Kubernetes appear to provide pricing competition and enable competing vendors to leverage these open source technologies to compete directly with our SDDC initiative. Enterprises and service providers have shown interest in building their own clouds based on open source projects such as OpenStack, and other companies have indicated their intention to expand offerings of virtual management and cloud computing solutions as well. Additionally, a number of enterprise IT hardware vendors have released solutions based on OpenStack including IBM and Cisco. VMware is delivering container technologies such as PKS, which we co-developed and market in partnership with Pivotal, and vSphere Integrated Containers that are designed to help customers adopt micro-services architectures. The adoption of distributed micro-service application architectures, and their alignment with container technologies, represents an emerging area of competition.

Other industry alliances. Many of our competitors have entered into or extended partnerships or other strategic relationships to offer more comprehensive virtualization and cloud computing solutions than they individually had offered. We expect these trends to continue as companies attempt to strengthen or maintain their positions in the evolving virtualization infrastructure and enterprise IT solutions industry. These alliances may result in more compelling product and service offerings than we offer.

Our partners and members of our developer and technology partner ecosystem. We face competition from our partners. For example, third parties currently selling our products and services could build and market their own competing products and services or market competing products and services of other vendors. Additionally, as formerly distinct sectors of enterprise IT such as software-based virtualization and hardware-based server, networking and storage solutions converge, we also increasingly compete with companies who are members of our developer and technology partner ecosystem. Consequently, we may find it more difficult to continue to work together productively on other projects, and the advantages we derive from our ecosystem could diminish. This competition could result in increased pricing pressure and sales and marketing expenses, thereby materially reducing our operating margins, and could also prevent our new products and services from gaining market acceptance, thereby harming our ability to increase, or causing us to lose, market share.

Intellectual Property

As of February 2, 2018, over 1,800 patents issued by the U.S. Patent and Trademark Office have been granted or assigned to us. We also have been granted or assigned patents from other countries. These patents cover various aspects of our server virtualization and other technologies. The granted U.S. patents expire beginning in 2018, with the last of the expiration dates being in 2036. We also have numerous pending U.S. provisional and non-provisional patent applications, and numerous pending foreign and international patent applications, that cover other aspects of our virtualization and other technologies.

We have federal trademark registrations in the U.S. for “VMWARE,” “VMWORLD,” “VSPHERE,” “VMWARE VCLOUD,” “VMWARE VIEW,” “VMOTION,” “HORIZON,” “AIRWATCH,” “VREALIZE,” “VFABRIC,” “VCLOUD,” “VMWARE NSX” and numerous other trademarks. We have also registered trademarks in a number of foreign countries.

We rely on a combination of patent, trademark, copyright and trade secret laws in the U.S. and other jurisdictions, as well as confidentiality procedures and contractual provisions to protect our intellectual property rights and our brand.

We enforce our intellectual property rights in the U.S. and a number of foreign countries. Despite our efforts, the steps we have taken to protect our proprietary rights may not be adequate to preclude misappropriation of our proprietary information or infringement of our intellectual property rights, and our ability to police such misappropriation or infringement is uncertain, particularly in countries outside of the United States. U.S. patent filings are intended to provide the holder with a right to exclude others from making, using, offering to sell, selling or importing into the U.S. products covered by the claims of granted patents.

Our granted U.S. patents, and any future patents (to the extent they are issued), may be contested, circumvented or invalidated in the future. Moreover, the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages, and we may not be able to prevent third parties from infringing these patents. Therefore, the exact effect of our patents and the other steps we have taken to protect our intellectual property cannot be predicted with certainty.

Employees

As of February 2, 2018, we had approximately 21,700 employees in 117 offices worldwide, less than 5% of which were contracted through Dell. None of our employees are represented by labor unions, and we consider current employee relations to be good.

We contract with Dell subsidiaries for support from Dell personnel who are managed by VMware on a full-time basis. These individuals are located in countries in which we do not currently have an operating subsidiary and are predominantly dedicated to our sales and marketing efforts. We use contractors from time to time for temporary assignments and in locations in which we do not currently have operating subsidiaries. In the event that these contractor resources were not available, we do not believe that this would have a material adverse effect on our operations.

Available Information

Our website is located at www.vmware.com, and our investor relations website is located at <http://ir.vmware.com>. Our goal is to maintain the Investor Relations website as a portal through which investors can easily find or navigate to pertinent information about us, all of which is made available free of charge, including:

- our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after we electronically file that material with or furnish it to the Securities and Exchange Commission (“SEC”);
- announcements of investor conferences, speeches and events at which our executives discuss our products, services and competitive strategies;
- webcasts of our quarterly earnings calls and links to webcasts of investor conferences at which our executives appear (archives of these events are also available for a limited time);
- additional information on financial metrics, including reconciliations of non-GAAP financial measures discussed in our presentations to the nearest comparable GAAP measure;
- press releases on quarterly earnings, product and service announcements, legal developments and international news;
- corporate governance information including our certificate of incorporation, bylaws, corporate governance guidelines, board committee charters, business conduct guidelines (which constitutes our code of business conduct and ethics) and other governance-related policies;
- other news, blogs and announcements that we may post from time to time that investors might find useful or interesting; and
- opportunities to sign up for email alerts and RSS feeds to have information pushed in real time.

The information found on our website is not part of, and is not incorporated by reference into, this or any other report we file with, or furnish to, the SEC.

EXECUTIVE OFFICERS OF THE REGISTRANT

The names of our executive officers and their ages as of March 20, 2018, are as follows:

Name	Age	Position(s)
Patrick Gelsinger	57	Chief Executive Officer and Director
Zane Rowe	47	Chief Financial Officer and Executive Vice President
Maurizio Carli	59	Executive Vice President, Worldwide Sales and Services
Amy Fliegelman Olli	54	Senior Vice President, General Counsel and Secretary
Sanjay Poonen	48	Chief Operating Officer, Customer Operations
Rangarajan (Raghu) Raghuram	55	Chief Operating Officer, Products and Cloud Services
Rajiv Ramaswami	52	Chief Operating Officer, Products and Cloud Services

Patrick Gelsinger has served as Chief Executive Officer and a director of VMware since September 2012. Prior to joining VMware, he served as President and Chief Operating Officer, EMC Information Infrastructure Products at EMC from

September 2009 to August 2012. Mr. Gelsinger joined EMC from Intel Corporation, where he was Senior Vice President and Co-General Manager of Intel Corporation's Digital Enterprise Group from 2005 to September 2009 and served as Intel's Senior Vice President, Chief Technology Officer from 2002 to 2005. Prior to this, Mr. Gelsinger led Intel's Desktop Products Group.

Zane Rowe has served as VMware's Chief Financial Officer and Executive Vice President since March 2016. Prior to joining VMware, he was EMC's Executive Vice President and Chief Financial Officer from October 2014 until February 2016. Prior to joining EMC, Mr. Rowe was Vice President of North American Sales of Apple Inc., a technology company that designs, develops, and sells consumer electronics, computer software, online services, and personal computers, from May 2012 until May 2014. He was Executive Vice President and Chief Financial Officer of United Continental Holdings, Inc., an airline holdings company, from October 2010 until April 2012 and was Executive Vice President and Chief Financial Officer of Continental Airlines from August 2008 to September 2010. Mr. Rowe joined Continental in 1993. Mr. Rowe currently serves on the board of Sabre Corporation and Pivotal Software, Inc., an indirect majority-owned subsidiary of VMware's parent company, Dell Technologies, and in which VMware has an ownership interest.

Maurizio Carli has served as VMware's Executive Vice President, Worldwide Sales and Services since February 2017. Mr. Carli previously served as VMware's Executive Vice President, Worldwide Sales since April 2016, Corporate Senior Vice President and General Manager, Americas from April 2015 to March 2016, and as Senior Vice President and General Manager, EMEA from December 2008 to April 2015. Before joining VMware, Mr. Carli held executive sales management positions at Google Inc., where he served as Managing Director, Enterprise Business, EMEA from June 2008 to November 2008; Business Objects S.A., where he served as Senior Vice President & General Manager, EMEA from December 2002 to December 2007; and at IBM Corporation, where he spent 19 years, from 1984 to 2002, serving in a variety of sales, marketing and leadership positions, including Vice President Software Group from 2000 to 2002 and General Manager and Vice President Tivoli EMEA from 1998 to 2000.

Amy Fliegelman Olli joined VMware as Senior Vice President and General Counsel in August 2017, and was appointed as Secretary in October 2017. Prior to joining VMware, Ms. Fliegelman Olli served as Senior Vice President and General Counsel of Avaya, Inc., a provider of contact center, unified communications and networking products, from June 2014 through August 2017. Previously, she was the General Counsel of CA, Inc., from September 2006 to June 2014 where her responsibilities covered all legal, governance, compliance, internal audit, security, risk management and controls matters. Ms. Fliegelman Olli also spent 18 years with IBM Corporation, ultimately serving as Vice President and General Counsel for the Americas and Europe.

Sanjay Poonen has served as VMware's Chief Operating Officer, Customer Operations since October 2016. Prior to that he served as Executive Vice President and General Manager, End-User Computing, Head of Global Marketing from April 2016 to October 2016. He joined VMware as Executive Vice President and General Manager, End-User Computing in August 2013. Prior to joining VMware, he spent more than seven years at SAP AG, an enterprise application software and services company, serving as President and Corporate Officer of Platform Solutions and the Mobile Division from April 2012 to July 2013, prior to that as President of Global Solutions from November 2010 to March 2012, as Executive Vice President of Performance Optimization Apps from June 2008 to September 2009 and Senior Vice President of Analytics from April 2006 to May 2008. Mr. Poonen's over 20 years of technology industry experience also included executive-level positions with Symantec and Veritas, and product management and engineering positions with Alphablox Corporation, Apple, Inc. and Microsoft Corporation.

Rangarajan (Raghu) Raghuram has served as VMware's Chief Operating Officer, Products and Cloud Services since October 2016. Prior to that he served as Executive Vice President, Software-Defined Data Center Division from April 2012 to October 2016. Mr. Raghuram joined VMware in 2003 and has held multiple product management and marketing roles. Mr. Raghuram served as Senior Vice President and General Manager, Cloud Infrastructure and Management, Virtualization and Cloud Platforms, and Enterprise Products, from December 2009 through March 2012. Mr. Raghuram previously served as Vice President of VMware's Server Business Unit and of Product and Solutions Marketing from September 2003 through December 2009. Prior to VMware, Mr. Raghuram held product management and marketing roles at Netscape Communications Corporation and Bang Networks, Inc.

Rajiv Ramaswami has served as VMware's Chief Operating Officer, Products and Cloud Services since October 2016. Mr. Ramaswami joined VMware in April 2016 and served as VMware's Executive Vice President and General Manager of its Networking and Security business. Prior to joining VMware, he was Executive Vice President and General Manager of the Infrastructure & Networking Group of Broadcom Corporation, a semiconductor company, from 2010. Prior to that he was Vice President and General Manager of the Cloud Services and Switching Technology Group at Cisco Systems, Inc., where he also served as Vice President and General Manager for a variety of business units in Optical, Switching and Storage Networking. Prior to joining Cisco, he served in various technical and leadership positions at Xros, Tellabs Inc. and IBM's Thomas J. Watson Research Center. Mr. Ramaswami is a member of the board of directors of NeoPhotonics Corporation.

ITEM 1A. RISK FACTORS

The risk factors that appear below could materially affect our business, financial condition and operating results. The risks and uncertainties described below are not the only risks and uncertainties facing us. Our business is also subject to general risks and uncertainties that affect many other companies. Specific risk factors related to our status as a controlled subsidiary of Dell following Dell's acquisition of our former majority stockholder EMC on September 7, 2016 (the "Dell Acquisition"), including, among other things, the uncertainty arising from Dell's Schedule 13D/A filing of February 2, 2018, overlapping business opportunities, Dell's ability to control certain transactions and resource allocations and related persons transactions with Dell and its other affiliated companies are set forth below under the heading "Risks Related to Our Relationship with Dell."

Risks Related to Our Business**Our success depends increasingly on customer acceptance of our newer products and services.**

Our products and services are primarily based on server virtualization and related compute technologies used for virtualizing on-premises data center servers, which form the foundation for private cloud computing. As the market for server virtualization continues to mature, the rate of growth in license sales of our vSphere hypervisor product has declined. We are increasingly directing our product development and marketing efforts toward products and services that enable businesses to utilize virtualization as the foundation for private, public and hybrid cloud-based computing and mobile computing, including our vSphere-based SDDC products such as our vRealize management and automation offerings, vSAN storage virtualization offerings, and NSX offerings, as well as our Horizon client virtualization offerings, AirWatch mobile device management offerings and our VMware Cloud on AWS offering, which became available in certain geographies in fiscal 2018. We have also been introducing SaaS versions of our on-premises products, including VMware Horizon Suite and certain AirWatch offerings, and are working to extend our SDDC and NSX offerings and management software into the public cloud and to introduce cloud products and services by investing in cloud and SaaS initiatives and partnering with public cloud providers such as Amazon Web Services ("AWS") and IBM. These initiatives present new and difficult technological and compliance challenges, and significant investments will be required to develop or acquire solutions to address those challenges. Our success depends on our current and future customers perceiving technological and operational benefits and cost savings associated with adopting our private and hybrid cloud solutions and our client virtualization and mobile device management solutions. As the market for our server virtualization products continues to mature, and the scale of our business has increased, our rate of revenue growth increasingly depends upon the success of our newer product and service offerings. To the extent that our newer products and services are adopted more slowly than revenue growth in our established server virtualization offerings declines, our revenue growth rates may slow materially or our revenue may decline substantially, we may fail to realize returns on our investments in new initiatives and our operating results could be materially adversely affected.

A significant decrease in demand for our server virtualization products would adversely affect our operating results.

A significant portion of our revenue is derived, and will for the foreseeable future continue to be derived, from our server virtualization products. As more businesses achieve high levels of virtualization in their data centers, the market for our VMware vSphere product continues to mature. Additionally, as businesses increasingly utilize public cloud and SaaS-based offerings, they are building more of their new compute workloads off-premises and are increasingly shifting some of their existing and many of their new workloads to public cloud providers, thereby limiting growth, and potentially reducing, the market for on-premises deployments of VMware vSphere. Although sales of VMware vSphere have declined as a portion of our overall business, and we expect this trend to continue, VMware vSphere remains key to our future growth, as it serves as the foundation for our newer SDDC, network virtualization and our newer cloud and SaaS offerings. Although we have launched, and are continuing to develop products to extend our vSphere-based SDDC offerings to the public cloud, due to our product concentration a significant decrease in demand for our server virtualization products would adversely affect our operating results.

We face intense competition that could adversely affect our operating results.

The virtualization, cloud computing, end-user computing and software-defined data center industries are interrelated and rapidly evolving, and we face intense competition across all the markets for our products and services. Many of our current or potential competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, technical, sales, marketing and other resources than we do. Additionally, the adoption of public cloud, micro-services, containers, and open source technologies has the potential to erode our profitability.

We face competition from, among others:

Providers of public cloud infrastructure and SaaS-based offerings. As businesses increasingly utilize public cloud and SaaS-based offerings, they are building more of their new compute workloads off-premises and may also shift some of their existing workloads. As a result, the demand for on-premises IT resources is expected to slow, and our products and services will need to increasingly compete for customers' IT workloads with off-premises public cloud and SaaS-based offerings. If our private, hybrid and public cloud products and services fail to address evolving customer requirements, the demand for

VMware's virtualization products and services may decline, and we could experience lower growth. Additionally, VCPP offerings from our partners may compete directly with IaaS offerings from various public cloud providers such as AWS and Microsoft. In fiscal 2018, we made VMware Cloud on AWS, a strategic alliance with AWS to deliver a vSphere-based cloud service running in AWS data centers, available in certain geographies. Our strategic alliance with Amazon may also be seen as competitive with VCPP offerings and adversely affect our relationship with VCPP partners, while some VCPP partners may elect to include VMware Cloud on AWS as part of their managed services provider offerings.

Large, diversified enterprise software and hardware companies . These competitors supply a wide variety of products and services to, and have well-established relationships with, our current and prospective end users. For example, small- to medium-sized businesses and companies in emerging markets that are evaluating the adoption of virtualization-based technologies and solutions may be inclined to consider Microsoft solutions because of their existing use of Windows and Office products. Some of these competitors have in the past and may in the future take advantage of their existing relationships to engage in business practices that make our products and services less attractive to our end users. Other competitors have limited or denied support for their applications running in VMware virtualization environments. In addition, these competitors could integrate competitive capabilities into their existing products and services and make them available without additional charge. For example, Oracle provides free server virtualization software intended to support Oracle and non-Oracle applications, Microsoft offers its own server, network, and storage virtualization software packaged with its Windows Server product as well as built-in virtualization in the client version of Windows and Cisco includes network virtualization technology in many of their data center networking platforms. As a result, existing and prospective VMware customers may elect to use products that are perceived to be "free" or "very low cost" instead of purchasing VMware products and services for certain applications where they do not believe that more advanced and robust capabilities are required.

Companies offering competing platforms based on open source technologies . Open source technologies for virtualization, containerization and cloud platforms such as Xen, KVM, Docker, Rocket, OpenShift, Mesos, Kubernetes and OpenStack appear to provide pricing competition and enable competing vendors to leverage these open source technologies to compete directly with our SDDC initiative. Enterprises and service providers have shown interest in building their own clouds based on open source projects such as OpenStack, and other companies have indicated their intention to expand offerings of virtual management and cloud computing solutions as well. Additionally, a number of enterprise IT hardware vendors have released solutions based on OpenStack, including IBM and Cisco. VMware is delivering container technologies such as Pivotal Container Services, which we co-developed and market in partnership with Pivotal, and vSphere Integrated Containers that are designed to help customers adopt micro-services architectures. The adoption of distributed micro-service application architectures, and their alignment with container technologies, represents an emerging area of competition.

Other industry alliances . Many of our competitors have entered into or extended partnerships or other strategic relationships to offer more comprehensive virtualization and cloud computing solutions than they individually had offered. We expect these trends to continue as companies attempt to strengthen or maintain their positions in the evolving virtualization infrastructure and enterprise IT solutions industry. These alliances may result in more compelling product and service offerings than we offer.

Our partners and members of our developer and technology partner ecosystem . We face competition from our partners. For example, third parties currently selling our products and services could build and market their own competing products and services or market competing products and services of other vendors. Additionally, as formerly distinct sectors of enterprise IT such as software-based virtualization and hardware-based server, networking and storage solutions converge, we also increasingly compete with companies who are members of our developer and technology partner ecosystem. Consequently, we may find it more difficult to continue to work together productively on other projects, and the advantages we derive from our ecosystem could diminish.

This competition could result in increased pricing pressure and sales and marketing expenses, thereby materially reducing our operating margins, and could also prevent our new products and services from gaining market acceptance, thereby harming our ability to increase, or causing us to lose, market share.

The loss of key management personnel could harm our business.

We depend on the continued services of key management personnel. We generally do not have employment or non-compete agreements with our employees, and, therefore, they could terminate their employment with us at any time without penalty and could pursue employment opportunities with any of our competitors. In addition, we do not maintain any key-person life insurance policies. The loss of key management personnel could harm our business.

Competition for our target employees is intense and costly, and we may not be able to attract and retain highly skilled employees.

To execute on our strategy, we must continue to attract and retain highly qualified personnel. Competition for these personnel is intense, especially for senior sales executives and engineers with significant experience designing and developing

software and cloud offerings. We may not be successful in attracting and retaining qualified personnel. We have in the past experienced, and we expect to continue to experience in the future, difficulty in hiring and retaining highly skilled employees with appropriate qualifications. Many of the companies with which we compete for experienced personnel have greater resources than we have. Research and development personnel are also aggressively recruited by startup and emerging growth companies, which are especially active in many of the technical areas and geographic regions in which we conduct product and service development. Competition for our key personnel results in increased costs in the form of cash and stock-based compensation and can have a dilutive impact on our stock. Additionally, changes in immigration and work permit laws and regulations or the administration or interpretation of such laws or regulations could impair our ability to attract and retain highly qualified employees. If we fail to attract new personnel or fail to retain and motivate our current personnel, our business and future growth prospects could suffer.

The final impact of the 2017 Tax Cuts and Jobs Act on our tax liabilities is highly uncertain, may differ substantially from our provisional estimates and may adversely impact our operating results.

The 2017 Tax Cuts and Jobs Act (the “2017 Tax Act”), enacted on December 22, 2017, significantly affects U.S. tax law by changing how the U.S. imposes income tax on multinational corporations. The U.S. Department of Treasury has broad authority to issue regulations and interpretative guidance that may significantly impact how we will apply the law and impact our results of operations.

The 2017 Tax Act requires complex computations to be performed that were not previously required in U.S. tax law, significant judgments to be made in interpretation of the provisions of the 2017 Tax Act, significant estimates in calculations, and the preparation and analysis of information not previously relevant or regularly produced. The 2017 Tax Act also imposes additional changes in the taxation of consolidated tax groups, such as the consolidated tax group of which Dell is the parent and of which VMware is a member, which we must then interpret in the context of our tax sharing agreement with Dell to determine our actual tax liability. Furthermore, the IRS has yet to issue guidance on certain issues that could be material to us.

As such, the application of accounting guidance for significant items under the 2017 Tax Act is highly uncertain. Further, the U.S. Treasury Department and other standard-setting bodies will continue to issue guidance and interpret how provisions of the Tax Act will be administered and applied to specific situations important to us that is different from our interpretations and expectations.

Based upon the guidance issued thus far by U.S. tax and accounting authorities, we have provided a provisional estimate of the effect of the 2017 Tax Act in our consolidated financial statements for fiscal 2018. Our final analysis, which will be recorded in the period completed, may differ significantly from our current provisional estimates. Accordingly, our final analysis may show that our tax obligations and our effective tax rate are higher than our provisional estimates, which could have a material adverse effect on our financial condition and our operating results.

Adverse economic conditions may harm our business.

Our business depends on the overall demand for IT and on the economic health of our current and prospective customers. The purchase of our products and services is often discretionary and may involve a significant commitment of capital and other resources. Weak economic conditions or significant uncertainty regarding the stability of financial markets could adversely impact our business, financial condition and operating results in a number of ways, including by lengthening sales cycles, affecting the size of EAs that customers will commit to, reducing the level of our non-EA transactional sales, lowering prices for our products and services, reducing unit sales and reducing the rate of adoption of our products and services by new customers and the willingness of current customers to purchase upgrades to our existing products and services. For example, a recurrence of the sovereign debt crisis in Europe, repercussions from the United Kingdom’s planned exit from the European Union or that region’s failure to sustain its recovery from recession would threaten to suppress demand and our customers’ access to credit in that region which is an important market for our products and services. In response to sustained economic uncertainty, many national and local governments that are current or prospective customers for our products and services, including the U.S. federal government, have made, or threatened to make, significant spending cutbacks which could reduce the amount of government spending on IT and the potential demand for our products and services from the government sector.

Regional economic uncertainty can also result in general and ongoing tightening in the credit markets, lower levels of liquidity, increases in the rates of default and bankruptcy and significant volatility in the credit, equity and fixed income markets. Changes in governmental fiscal, monetary and tax policies may also impact interest rates on credit and debt, which have been at relatively low levels for several years. As a result, current or potential customers may be unable to fund software purchases, which could cause them to delay, decrease or cancel purchases of our products and services. Increases in our cost of borrowing could also impact our ability to access capital markets should we wish to raise additional funding for business investments, which could adversely affect our ability to repay or refinance our outstanding indebtedness, fund future product development and acquisitions or conduct stock buybacks.

We may not be able to respond to rapid technological changes with new solutions and services offerings.

The virtualization, cloud computing, end-user computing and SDDC industries are characterized by rapid technological change, changing customer needs, frequent new software product introductions and evolving industry standards. The introduction of third-party solutions embodying new technologies and the emergence of new industry standards could make our existing and future software solutions obsolete and unmarketable. Cloud computing has proven to be a disruptive technology that is altering the way that businesses consume, manage and provide physical IT resources, applications, data and IT services. We may not be able to establish or sustain our thought leadership in the cloud computing and enterprise software fields, and our customers may not view our products and services as cost effective, innovative and best-of-breed, which could result in a reduction in market share and our inability to command a pricing premium over competitor products and services. We may not be able to develop updated products and services that keep pace with technological developments and emerging industry standards, that address the increasingly sophisticated needs of our customers or that interoperate with new or updated operating systems and hardware devices. We may also fail to adequately anticipate and prepare for the commercialization of emerging technologies such as blockchain and the IoT and thereby fail to take advantage of new market opportunities or fall behind early movers in those markets.

Our ability to react quickly to new technology trends and customer requirements is negatively impacted by the length of our development cycle for new products and services and product and service enhancements, which has frequently been longer than we originally anticipated. This is due in part to the increasing complexity of our product offerings as we increase their interoperability, and enable and maintain their compatibility with multiple IT resources such as public clouds utilized by our customers, which can significantly increase the development time and effort necessary to achieve the interoperability of our offerings while maintaining product quality. When we release significant new versions of our existing offerings, the complexity of our products may require existing customers to remove and replace prior versions in order to take full advantage of substantial new features and capabilities, which may subdue initial demand for the new versions or, conversely, depress demand for existing versions until the customer is ready to purchase and install the newest release. If we are unable to evolve our solutions and offerings in time to respond to and remain ahead of new technological developments, our ability to retain or increase market share and revenue in the virtualization, cloud computing, end-user computing and SDDC industries could be materially adversely affected. With respect to our SDDC products, if we fail to introduce compelling new features in future upgrades to our VMware vSphere product line, manage the transition to hybrid cloud platforms, develop new or tightly integrate existing applications for our virtualization technology that address customer requirements for integration, automation and management of their IT systems with public cloud resources, overall demand for products and services based on VMware vSphere may decline. Additionally, if we fail to realize returns on investments in our newer SaaS and cloud initiatives, our operating margins and results of operations will be adversely impacted.

Breaches of our cybersecurity systems or the systems of our vendors, partners and suppliers could seriously harm our business.

We increasingly depend upon our IT systems and the IT systems of key SaaS providers to conduct virtually all of our business operations, ranging from our internal operations and product development activities to our marketing and sales efforts and communications with our customers and business partners. Unauthorized parties (which may have included nation states and individuals sponsored by them) have penetrated our network security and our website in the past and such unauthorized parties may do so in the future. Employees or contractors have introduced vulnerabilities in, and enabled the exploitation of, our IT environments in the past and may do so in the future. These cyber-attacks threaten to misappropriate our proprietary information, cause interruptions of our IT services and commit fraud. Because the techniques used by unauthorized persons to access or sabotage networks change frequently and may not be recognized until launched against a target, we may be unable to anticipate these tactics. Further, if unauthorized access or sabotage remains undetected for an extended period of time, the effects of such breach could be exacerbated. In addition, sophisticated hardware and operating system software and applications that we produce or procure from third parties may contain defects in design or manufacture, including “bugs” and other problems that could unexpectedly interfere with the operation of our systems and processes. Our exposure to cybersecurity threats and negative consequences of cybersecurity breaches will likely increase as our customers conduct more purchase and service transactions online, and as we store increasing amounts of customer data and host or manage parts of customers’ businesses in cloud-based IT environments. Additionally, as we increasingly market the security features in our products, our products may be targeted by computer hackers seeking to compromise product security.

We have also outsourced a number of our business functions to third parties, and we rely upon distributors, resellers, system vendors and systems integrators to sell our products and services. Accordingly, if our cybersecurity systems and those of our contractors, partners and vendors fail to protect against breaches, our ability to conduct our business could be damaged in a number of ways, including:

- sensitive data regarding our business, including intellectual property and other proprietary data, could be stolen;

- our electronic communications systems, including email and other methods, could be disrupted, and our ability to conduct our business operations could be seriously damaged until such systems can be restored and secured;
- our ability to process customer orders and electronically deliver products and services could be degraded, and our distribution channels could be disrupted, resulting in delays in revenue recognition;
- defects and security vulnerabilities could be exploited or introduced into our software products or our hybrid cloud and SaaS offerings and impair or disrupt their availability, thereby damaging the reputation and perceived reliability and security of our products and services and potentially making the data systems of our customers vulnerable to further data loss and cyber incidents; and
- personally identifiable or confidential data of our customers, employees and business partners could be stolen or lost.

Should any of the above events occur, or are perceived to have occurred, we could be subject to significant claims for liability from our customers, we could face regulatory actions and sanctions from governmental agencies, our ability to protect our intellectual property rights could be compromised, our reputation and competitive position could be materially harmed and we could incur significant costs in order to upgrade our cybersecurity systems and remediate damages. Consequently, our business, financial condition and operating results could be materially adversely affected.

Our operating results may fluctuate significantly.

Our operating results may fluctuate due to a variety of factors, many of which are outside of our control. As a result, comparing our operating results on a period-to-period basis may not be meaningful, and our past results should not be relied upon as an indication of our future performance. In addition, a significant portion of our quarterly sales typically occurs during the last two weeks of the quarter, which generally reflects customer buying patterns for enterprise technology. As a result, our quarterly operating results are difficult to predict even in the near term. If our revenue or operating results fall below the expectations of investors or securities analysts or below any guidance we may provide to the market, the price of our Class A common stock would likely decline substantially.

Factors that may cause fluctuations in our operating results include, among others, the factors described elsewhere in this risk factors section and the following:

- fluctuations in demand, adoption rates, sales cycles and pricing levels for our products and services;
- changes in customers' budgets for information technology purchases and in the timing of their purchasing decisions;
- the timing of announcements or releases of new or upgraded products and services by us or by our competitors;
- the timing and size of business realignment plans and restructuring charges;
- our ability to maintain scalable internal systems for reporting, order processing, license fulfillment, product delivery, purchasing, billing and general accounting, among other functions;
- our ability to control costs, including our operating expenses;
- credit risks of our distributors, who account for a significant portion of product revenue and accounts receivable;
- the timing of when sales orders are processed, which can cause fluctuations in our backlog and impact our bookings and timing of revenue recognition;
- seasonal factors such as the end of fiscal period budget expenditures by our customers and the timing of holiday and vacation periods;
- renewal rates and the amounts of the renewals for EAs as original EA terms expire;
- the timing and amount of internally developed software development costs that may be capitalized;
- unplanned events that could affect market perception of the quality or cost-effectiveness of our products and solutions;
- the impact of new accounting pronouncements, for example, the adoption of Accounting Standards Update ("ASU") 2016-16, which could result in increased volatility in the provision for income taxes in periods in which transfers of intellectual property between our legal entities occur; and
- our ability to accurately predict the degree to which customers will elect to purchase our subscription-based offerings in place of licenses to our on-premises offerings.

We are exposed to foreign exchange risks.

Because we conduct business in currencies other than the U.S. dollar but report our operating results in U.S. dollars, we face exposure to fluctuations in currency exchange rates. During fiscal 2018, approximately 30% of our sales were invoiced and

collected in non-U.S. dollar denominated currencies. The realized gain or loss on foreign currency transactions is dependent upon the types of foreign currency transactions that we enter into, the exchange rates associated with these transactions and changes in those rates, the net realized gain or loss on our foreign currency forward contracts, and other factors. Although we hedge a portion of our foreign currency exposure, a significant fluctuation in exchange rates between the U.S. dollar and foreign currencies may adversely affect our operating results. For example, we experienced a measurable negative impact to our revenue in 2015 due to exchange rate fluctuations. Any future weakening of foreign currency exchange rates against the U.S. dollar would likely result in additional adverse impact on our revenue.

We operate a global business that exposes us to additional risks.

Our international activities account for a substantial portion of our revenue and profits, and we plan to further expand internationally. In addition, our investment portfolio includes investments in non-U.S. financial instruments and holdings in non-U.S. financial institutions, including European institutions. In addition to the risks described elsewhere in these risk factors, our international operations subject us to a variety of risks, including:

- difficulties in enforcing contracts and collecting accounts receivable and longer payment cycles, especially in emerging markets;
- difficulties in delivering support, training and documentation in certain foreign markets;
- tariffs and trade barriers, which could increase due to the current geopolitical climate, and other regulatory or contractual limitations on our ability to sell or develop our products and services in certain foreign markets;
- changes and instability in government policies and international trade arrangements that could adversely affect the ability of U.S.-based companies to conduct business in non-U.S. markets;
- economic or political instability and security concerns in countries that are important to our international sales and operations;
- difficulties in transferring funds from certain countries;
- increased compliance risks, particularly in emerging markets; and
- difficulties in maintaining appropriate controls relating to revenue recognition practices.

An example is the ongoing efforts of the Chinese government to more closely regulate network security. In that respect, the Chinese government enacted a new Cyber Security Law in November 2016 that came into effect on June 1, 2017. The new Cyber Security Law promotes utilization of “secure and reliable” network products and services, requires the sale of certain key network equipment and network security products to be subject to security certification, and imposes data localization measures and various network security measures relevant to a vaguely defined scope of “critical information infrastructure.” Among those network security measures is a requirement that certain network products and services procured by operators of “critical information infrastructure” undergo a formal security assessment in order to evaluate their “security” and “controllability.” The specific technical requirements of the security assessment have not yet been clarified.

Also, in December 2015, China enacted an Anti-Terrorism Law that gives local public security and state security authorities the broad discretionary authority to require companies to provide access to their equipment and decryption support in particular cases. Failure to comply with such requests can result in fines and imprisonment. In addition, a broad range of businesses will be required to verify the identities of customers and are prohibited from providing services to customers whose identities are unclear or who refuse to cooperate in the verification process. If we are not able to, or choose not to, comply with these and other information and network security standards that the Chinese government might implement in the future, our business in China may suffer.

Furthermore, if we fail to comply with legal and regulatory requirements covering the foreign activities of U.S. corporations, such as export control requirements and the Foreign Corrupt Practices Act, as well as with local regulatory requirements in non-U.S. jurisdictions, we may be exposed to significant fines and penalties and reputational harm. These risks will increase as we expand our operations in locations with a higher incidence of corruption and fraudulent business practices.

In addition, potential fallout from past disclosures related to the U.S. Internet and communications surveillance and possible efforts to enable increased surveillance could make foreign customers reluctant to purchase products and services from U.S.-based technology companies and impair our growth rate in foreign markets.

Our failure to manage any of these risks successfully could negatively affect our reputation and adversely affect our operating results.

We have outstanding indebtedness in the form of unsecured notes and may incur other debt in the future, which may adversely affect our financial condition and future financial results.

During fiscal 2018, we issued \$4,000 million in unsecured notes through a debt offering and repaid \$1,230 million of the notes payable to Dell, utilizing a portion of the proceeds from the offering. An additional unsecured promissory note with an outstanding principal amount of \$270 million owed to Dell remains outstanding. We also entered into a \$1,000 million unsecured credit agreement establishing a revolving credit facility (“Credit Facility”) that is currently undrawn. Our current and any future debt may adversely affect our financial condition and future financial results by, among other things:

- requiring the dedication of a portion of our expected cash flow from operations to service our indebtedness, thereby reducing the amount of expected cash flow available for other purposes, including capital expenditures and acquisitions; and
- limiting our flexibility in planning for, or reacting to, changes in our business and our industry.

The terms of our unsecured notes and Credit Facility impose restrictions on us and require us to maintain compliance with specified and customary covenants. Our ability to comply with these covenants may be affected by events beyond our control, including prevailing economic, financial, and industry conditions. If we breach any of the covenants and do not obtain a waiver from the lenders or note holders, then, subject to applicable cure periods, any outstanding indebtedness may be declared immediately due and payable.

In addition, any actual or anticipated changes to our credit ratings, including any announcement that our credit ratings are under review, by any rating agency may negatively impact the value and liquidity of both our debt and equity securities. Under certain circumstances, if our credit ratings are downgraded or other negative action is taken, the interest rate payable by us and the cost of borrowing under our Credit Facility could increase. Downgrades in our credit ratings could also affect the terms of and restrict our ability to obtain additional financing in the future. In addition, upon the occurrence of certain downgrades of the ratings of our unsecured notes, we may be required to repurchase our unsecured notes at a repurchase price equal to 101% of the aggregate principal plus any accrued and unpaid interest on the date of purchase.

Additionally, our parent company, Dell, currently has a significant level of debt financing. Accordingly, negative changes to Dell’s credit rating could also negatively impact our credit rating and the value and liquidity of any future debt we might raise. Refer to “Liquidity and Capital Resources” 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 for more information on our outstanding indebtedness.

Our current research and development efforts may not produce significant revenue for several years, if at all.

Developing our products and services is expensive. In particular, developing and launching disruptive technologies in new areas, as we are continuing to do with our VMware NSX virtual networking, vSAN virtual storage, cloud and SaaS initiatives, requires significant investments of resources and often entails greater risk than incremental investments in existing products and services. Our investment in research and development may not result in marketable products or services or may result in products and services that generate less revenue than we anticipate. Our research and development expenses were approximately 22% of our total revenue during fiscal 2018. Our future plans include significant investments in software research and development and related product 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 for several years, if at all.

We are involved in litigation, investigations and regulatory inquiries and proceedings that could negatively affect us.

From time to time, we are involved in various legal, administrative and regulatory proceedings, claims, demands and investigations relating to our business, which may include claims with respect to commercial, product liability, intellectual property, breach of contract, employment, class action, whistleblower and other matters. In the ordinary course of business, we also receive inquiries from and have discussions with government entities regarding the compliance of our contracting and sales practices with laws and regulations.

We have been, and expect to continue to be, subject to intellectual property infringement claims, including claims by entities that do not have operating businesses of their own and therefore may limit our ability to seek counterclaims for damages and injunctive relief. In addition to monetary judgments, a judgment could also include an injunction or other court order that could prevent us from offering our products. In addition, we might be required to seek a license for the use of such intellectual property, which may not be available on commercially reasonable terms or at all. Alternatively, we may be required to develop non-infringing technology, which could require significant effort and expense and may ultimately not be successful. Third parties may also assert infringement claims against our customers and channel partners, which could require us to initiate or defend potentially protracted and costly litigation on their behalf, regardless of the merits of these claims, because we generally indemnify our customers and channel partners from claims of infringement of proprietary rights of third parties in

connection with the use of our products. These matters can be time-consuming, divert management's attention and resources and cause us to incur significant expenses. Allegations made in the course of regulatory or legal proceedings may also harm our reputation, regardless of whether there is merit to such claims. Furthermore, because litigation and the outcome of regulatory proceedings are inherently unpredictable, our business, financial condition or operating results could be materially affected by an unfavorable resolution of one or more of these proceedings, claims, demands or investigations.

Refer to Note K to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for a description of certain claims and litigation.

We may not be able to adequately protect our intellectual property rights.

We depend on our ability to protect our proprietary technology. We rely on trade secret, patent, copyright and trademark laws and confidentiality agreements with employees and third parties, all of which offer only limited protection. As such, despite our efforts, the steps we have taken to protect our proprietary rights may not be adequate to prevent misappropriation of our proprietary information or infringement of our intellectual property rights, and our ability to police such misappropriation or infringement is uncertain, particularly in countries outside of the U.S. In addition, we rely on confidentiality or license agreements with third parties in connection with their use of our products and technology. There is no guarantee that such parties will abide by the terms of such agreements or that we will be able to adequately enforce our rights, in part because we rely on "click-wrap" and "shrink-wrap" licenses in some instances.

Detecting and protecting against the unauthorized use of our products, technology proprietary rights and intellectual property rights is expensive, difficult and, in some cases, impossible. Litigation is necessary from time to time to enforce or defend our intellectual property rights, to protect our trade secrets or to determine the validity and scope of the proprietary rights of others. Despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating our intellectual property, which could result in a substantial loss of our market share.

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

Many of our products and services incorporate so-called "open source" software, and we may incorporate open source software into other products and services in the future. Open source software is generally licensed by its authors or other third parties under open source licenses. Open source licensors generally do not provide warranties or assurance of title or controls on origin of the software, which exposes us to potential liability if the software fails to work or infringes the intellectual property of a third party.

We monitor our use of open source software in an effort to avoid subjecting our products to conditions we do not intend and avoid exposing us to unacceptable financial risk. However, the processes we follow to monitor our use of open source software could fail to achieve their intended result. In addition, although we believe that we have complied with our obligations under the various applicable licenses for open source software that we use, there is little or no legal precedent governing the interpretation of terms in most of these licenses, which increases the risk that a court could interpret the license differently than we do.

From time to time, we receive inquiries or claims from authors or distributors of open source software included in our products regarding our compliance with the conditions of one or more open source licenses. An adverse outcome to a claim could require us to:

- pay significant damages;
- stop distributing our products that contain the open source software;
- revise or modify our product code to remove alleged infringing code;
- release the source code of our proprietary software; or
- take other steps to avoid or remedy an alleged infringement.

In March 2015, a software developer who alleges that software code he wrote is used in a component of our vSphere product filed a lawsuit against us in Germany alleging copyright infringement for failing to comply with the terms of the open source General Public License v.2 ("GPL v.2") and seeking an order requiring us to comply with the GPL v.2 or cease distribution of any affected code within Germany. On July 8, 2016, the German court issued a written decision dismissing the lawsuit. On August 9, 2016, a Notice of Appeal was filed. We have filed our responsive appellate brief. An adverse outcome to this claim on appeal or to other claims could have a material adverse impact on our intellectual property rights, our operating results and financial condition.

The evolution of our business requires more complex go-to-market strategies, which involve significant risk.

Our increasing focus on developing and marketing IT management and automation and IaaS (including software-defined networking, VCPP-integrated virtual desktop and mobile device, cloud and SaaS) offerings that enable customers to transform their IT systems requires a greater focus on marketing and selling product suites and more holistic solutions, rather than selling on a product-by-product basis. Consequently, we have developed, and must continue to develop, new strategies for marketing and selling our offerings. In addition, marketing and selling new technologies to enterprises requires significant investment of time and resources in order to educate customers on the benefits of our new product offerings. These investments can be costly and the additional effort required to educate both customers and our own sales force can distract from their efforts to sell existing products and services.

Our success depends upon our ability to develop appropriate business and pricing models.

If we cannot adapt our business models to keep pace with industry trends, including the industry-wide transition to cloud-based computing, our revenue could be negatively impacted. Certain of our product initiatives, such as our VCPP and SaaS offerings, have a subscription model. As we increase our adoption of subscription-based pricing models for our products, we may fail to set pricing at levels appropriate to maintain our revenue streams or our customers may choose to deploy products from our competitors that they believe are priced more favorably. In addition, we may fail to accurately predict subscription renewal rates or their impact on operating results, and because revenue from subscriptions is recognized for our services over the term of the subscription, downturns or upturns in sales may not be immediately reflected in our results. Additionally, as customers transition to our hybrid cloud and SaaS products and services, our revenue growth rate may be adversely impacted during the period of transition as we will recognize less revenue up front than we would otherwise recognize as part of the multi-year license arrangements through which we typically sell our established offerings. Finally, as we offer more services that depend on converting users of free services to users of premium services and converting purchasers of our on-premises products to our SaaS offerings, and as such services grow in size, our ability to maintain or improve and to predict conversion rates will become more important.

Our products and services are highly technical and may contain errors, defects or security vulnerabilities.

Our products and services are highly technical and complex and, when deployed, have contained and may contain errors, defects or security vulnerabilities. Some errors in our products or services may only be discovered after a product or service has been installed and used by customers. Undiscovered vulnerabilities in our products or services could expose our customers to hackers or other unscrupulous third parties who develop and deploy viruses, worms and other malicious software programs that could attack our products or services. In the past, VMware has been made aware of public postings by hackers of portions of our source code. It is possible that the released source code could expose unknown security vulnerabilities in our products and services that could be exploited by hackers or others. We may also inherit unknown security vulnerabilities when we integrate the products or services of other companies into VMware products or services. Actual or perceived errors, defects or security vulnerabilities in our products or services could harm our reputation and lead some customers to return products or services, reduce or delay future purchases or use competitive products or services.

Failure to effectively manage our product and service lifecycles could harm our business.

As part of the natural lifecycle of our products and services, we periodically inform customers that products or services will be reaching their end of life or end of availability and will no longer be supported or receive updates and security patches. To the extent these products or services remain subject to a service contract with the customer, we offer to transition the customer to alternative products or services. Failure to effectively manage our product and service lifecycles could lead to customer dissatisfaction and contractual liabilities, which could adversely affect our business and operating results.

Our success depends on the interoperability of our products and services with those of other companies.

The success of our products depends upon the cooperation of hardware and software vendors to ensure interoperability with our products and offer compatible products and services to end users. In addition, we have begun to extend the functionality of various products to work with native public cloud applications, which may require the cooperation of public cloud vendors. To the extent that hardware, software and public cloud vendors perceive that their products and services compete with ours or those of our controlling stockholder, Dell, they may have an incentive to withhold their cooperation, decline to share access or sell to us their proprietary APIs, protocols or formats, or engage in practices to actively limit the functionality, compatibility and certification of our products. In addition, vendors may fail to certify or support or continue to certify or support our products for their systems. If any of the foregoing occurs, our product development efforts may be delayed or foreclosed and it may be difficult and more costly for us to achieve functionality and service levels that would make our services attractive to end users, any of which could negatively impact our business and operating results.

Disruptions to our distribution channels could harm our business.

Our future success is highly dependent on our relationships with distributors, resellers, system vendors and systems integrators, which account for a significant portion of our revenue. Recruiting and retaining qualified channel partners and training them in the use of our technology and product offerings requires significant time and resources. Our failure to maintain good relationships with channel partners would likely lead to a loss of end users of our products and services, which would adversely affect our revenue. We generally do not have long-term contracts or minimum purchase commitments with our distributors, resellers, system vendors and systems integrators, and our contracts with these channel partners do not prohibit them from offering products or services that compete with ours.

Three of our distributors each accounted for 10% or more of our consolidated revenue during fiscal 2018. Although we believe that we have in place, or would have in place by the date of any such termination, agreements with replacement distributors sufficient to maintain our revenue from distribution, if we were to lose the distribution services of a significant distributor, such loss could have a negative impact on our operating results until such time as we arrange to replace these distribution services with the services of existing or new distributors.

Our SaaS offerings rely on third-party providers for data center space and colocation services.

Our SaaS offerings rely upon third-party providers to supply data center space, equipment maintenance and other colocation services. Although we have entered into various agreements for the lease of data center space, equipment maintenance and other services, third parties could fail to live up to the contractual obligations under those agreements. The failure of a third-party provider to prevent service disruptions, data losses or security breaches may require us to issue credits or refunds or indemnify or otherwise be liable to customers or third parties for damages that may occur. Additionally, if these third-party providers fail to deliver on their obligations, our reputation could be damaged, our customers could lose confidence in us and our ability to maintain and expand our SaaS offerings would be impaired.

Joint ventures may not yield expected benefits and outcomes.

As we expand our offerings into new technologies such as the public cloud and seek more efficient methods of marketing our products and services in regions where local partners can operate more easily, we sometimes rely upon joint ventures with established providers of IT products and services in particular regions, for example as go-to-market and channel partners. Joint ventures are inherently risky and the requirements for close ongoing cooperation and commitments from the joint venture partners to devote adequate resources often present significant challenges. Joint ventures can also be difficult to manage, given the potentially different interests of joint venture partners. Accordingly, there can be no guarantee that our joint ventures will achieve their intended objectives. If we are unable to continue our strategic alignment with joint venture partners or obtain the cooperation and commitments we are relying upon, our ability to successfully expand our offerings globally and in certain regions may diminish.

SaaS offerings, which involve various risks, constitute an important part of our business.

As we continue to develop and offer SaaS versions of our products, we will need to continue to evolve our processes to meet a number of regulatory, intellectual property, contractual and service compliance challenges. These challenges include compliance with licenses for open source and third-party software embedded in our SaaS offerings, maintaining compliance with export control and privacy regulations, including HIPAA, protecting our services from external threats, maintaining the continuous service levels and data security expected by our customers, preventing the inappropriate use of our services and adapting our go-to-market efforts. The expansion of our SaaS and related cloud offerings also requires significant investments, and our operating margins, results of operations and operating cash flows may be adversely affected if our new offerings are not widely adopted by customers.

Improper disclosure and use of personal data could result in liability and impact our business.

Our business is subject to a wide variety of laws and regulations regarding privacy and protection of personal data. Federal, state and foreign governments and agencies have adopted or are considering adopting laws and regulations regarding the collection, storage, use, processing and disclosure of this information. We collect contact and other personal or identifying information from our customers, and our customers increasingly use our services to store and process personal information and other regulated data, including protected health information subject to stringent data privacy laws. As an employer, we also maintain personal data of our employees and share that information with third party service providers, such as payroll and benefits providers. Our cloud computing service offerings, pursuant to which we offer cloud services and enable third-party service providers to offer cloud services built on our technology, expose us to particularly significant risks. We rely on the contractual representations of these third parties that they do not violate any applicable privacy laws and regulations or their own privacy policies and in some cases covenants requiring them to maintain certain security measures and protections.

Any failure or perceived failure by us or our business partners to comply with posted privacy policies, other federal, state or international privacy-related or data protection laws and regulations, or the privacy commitments contained in contracts

could result in proceedings against us by governmental entities or others and significant fines, which could have a material adverse effect on our business and operating results and harm our reputation. Further, any systems failure, unauthorized access or other compromise of our security that results in the release of our customers' or employees' data could (i) subject us to substantial damage claims, (ii) expose us to significant fines and costly regulatory remediation, (iii) harm our reputation and brand, and (iv) disrupt our business activities. The application of U.S. and international data privacy laws and regulations to cloud computing vendors is evolving and uncertain, and our existing contractual provisions may prove to be inadequate to protect us from claims for data loss or regulatory noncompliance made against cloud computing providers with whom we may partner. Additionally, privacy laws and regulations could negatively affect demand for our services, thereby reducing our revenue.

Our ability to collect and use data could be restricted by laws and regulations as well as by consumers' rights to opt out. Restrictions on our ability to collect data or the ability of our customers to collect data utilizing our products and services could negatively impact our business.

The European Union ("EU") data protection law, the General Data Protection Regulation ("GDPR"), which will become effective in May 2018, is wide-ranging in scope. In order to adapt to these new requirements, we are investing resources necessary to enhance our policies and controls across our business units and services relating to how we collect and use personal data relating to customers, employees and vendors. Additionally, we expect that the international transfer of personal data will present ongoing compliance challenges and complicate our business transactions as we negotiate and implement suitable arrangements with international customers and international and domestic vendors. As a result, our data transfers could require us to implement additional costly measures and require similar adjustments by our customers in order to continue utilizing our products and services. Failure to comply may lead to fines of up to €20 million or up to 4% of the annual global revenues of the infringer, whichever is greater. EU data protection laws and their interpretations continue to develop, and may be inconsistent from jurisdiction to jurisdiction, which may further impact our information processing activities.

Further, laws such as the EU's proposed e-Privacy Regulation are increasingly aimed at the use of personal information for marketing purposes, and the tracking of individuals' online activities. The currently proposed e-Privacy Regulation may change significantly before it is adopted, making its future scope and impact uncertain, and therefore require us to alter our current preparations for the GDPR. Once finalized, revised e-Privacy Regulation may impact our use of cookies and tracking technologies inside products and online, which could hamper our ability to collect and use data to monitor and improve the performance of our products and services. The final regulation may also change the rules around e-marketing and online tracking which could harm our ability to run promotions and effectively market our offerings. In addition, countries outside the EU are considering or have passed legislation that requires local storage and processing of data, which could increase the cost and complexity of delivering our services. Our current arrangements for the transfer of personal data will need to continue to adapt to future judicial decisions and regulatory activity as laws on privacy and the protection of personal data continue to evolve in the countries in which we do business.

If we fail to comply with our customer contracts or government contracting regulations, our business could be adversely affected.

Contracts with many of our customers include unique and specialized performance requirements. In particular, our contracts with federal, state, local and non-U.S. governmental customers and our arrangements with distributors and resellers who may sell directly to governmental customers are subject to various procurement regulations, contract provisions and other requirements relating to their formation, administration and performance. Any failure by us to comply with provisions in our customer contracts or any violation of government contracting regulations could result in the imposition of various civil and criminal penalties, which may include termination of contracts, forfeiture of profits, suspension of payments and, in the case of our government contracts, fines and suspension from future government contracting. Further, any negative publicity related to our customer contracts or any proceedings surrounding them, regardless of its accuracy, may damage our business and affect our ability to compete for new contracts. In the ordinary course of business, we also receive inquiries from and have ongoing discussions with government entities regarding the compliance of our contracting and sales practices with laws and regulations. A failure in the future to comply with federal and state governmental contracting requirements could result in the termination of customer contracts, our suspension from government work, the imposition of fines or other government sanctions or an inability to compete for new contracts, any of which could adversely affect our business, operating results or financial condition.

Acquisitions and divestitures could harm our business and operating results.

We have acquired in the past, and plan to acquire in the future, other businesses, products or technologies. We also from time to time sell or divest businesses, products and technologies. For instance, in May 2017, we sold the VMware vCloud Air business ("vCloud Air") to OVH US LLC. Acquisitions and divestitures involve significant risks and uncertainties, which include:

- disrupting our ongoing operations, diverting management from day-to-day responsibilities, increasing our expenses, and adversely impacting our business, financial condition and operating results;

- failure of an acquired business to further our business strategy;
- uncertainties in achieving the expected benefits of an acquisition or disposition, including enhanced revenue, technology, human resources, cost savings, operating efficiencies and other synergies;
- reducing cash available for operations, stock repurchase programs and other uses and resulting in potentially dilutive issuances of equity securities or the incurrence of debt;
- incurring amortization expense related to identifiable intangible assets acquired that could impact our operating results;
- difficulty integrating the operations, systems, technologies, products and personnel of acquired businesses effectively;
- the need to provide transition services in connection with a disposition, such as the sale of vCloud Air, which may result in the diversion of resources and focus;
- difficulty achieving expected business results due to a lack of experience in new markets, products or technologies or the initial dependence on unfamiliar distribution partners or vendors;
- retaining and motivating key personnel from acquired companies;
- declining employee morale and retention issues affecting employees of businesses that we acquire or dispose of, which may result from changes in compensation, or changes in management, reporting relationships, future prospects or the direction of the acquired or disposed business;
- assuming the liabilities of an acquired business, including acquired litigation-related liabilities and regulatory compliance issues, and potential litigation or regulatory action arising from a proposed or completed acquisition;
- lawsuits resulting from an acquisition or disposition;
- maintaining good relationships with customers or business partners of an acquired business or our own customers as a result of any integration of operations or the divestiture of a business upon which our customers rely, such as our recent divestiture of our vCloud Air business;
- unidentified issues not discovered during the diligence process, including issues with the acquired or divested business's intellectual property, product quality, security, privacy practices, accounting practices, regulatory compliance or legal contingencies;
- maintaining or establishing acceptable standards, controls, procedures or policies with respect to an acquired business;
- risks relating to the challenges and costs of closing a transaction; and
- the need to later divest acquired assets at a loss if an acquisition does not meet our expectations.

If our goodwill or amortizable intangible assets become impaired, we may be required to record a significant charge to earnings.

We may not realize all the economic benefit from our business acquisitions, which could result in an impairment of goodwill or intangibles. As of February 2, 2018, goodwill and amortizable intangible assets were \$4,597 million and \$548 million, respectively. We review our goodwill and amortizable intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. We test goodwill for impairment at least annually. Factors that may lead to impairment include a substantial decline in stock price and market capitalization or cash flows, reduced future cash flow estimates related to the assets and slower growth rates in our industry. We may be required to record a significant charge in our financial statements during the period in which any impairment of our goodwill or amortizable intangible assets is determined, which would negatively impact our operating results.

Problems with our information systems could interfere with our business and could adversely impact our operations.

We rely on our information systems and those of third parties for processing customer orders, delivering products, providing services and support to our customers, billing and tracking our customer orders, fulfilling contractual obligations, performing accounting operations and otherwise running our business. If our systems fail, our disaster and data recovery planning and capacity may prove insufficient to enable timely recovery of important functions and business records. Any disruption in our information systems and those of the third parties upon whom we rely could have a significant impact on our business.

In addition, we continuously work to enhance our information systems, such as our enterprise resource planning software. The implementation of these types of enhancements is frequently disruptive to the underlying business of an enterprise, which may especially be the case for us due to the size and complexity of our business. Implementation may disrupt internal controls and business processes and could introduce unintended vulnerability to error.

Additionally, our information systems may not support new business models and initiatives and significant investments could be required in order to upgrade them. For example, in February 2017 we implemented a change in our fiscal calendar, which required us to make adjustments to our critical business processes and data systems, and in February 2018 we implemented new revenue accounting software.

We may have exposure to additional tax liabilities, and our operating results may be adversely impacted by higher than expected tax rates.

As a multinational corporation, we are subject to income taxes as well as non-income based taxes, such as payroll, sales, use, value-added, net worth, property and goods and services taxes, in both the U.S. and various foreign jurisdictions. Our domestic and international tax liabilities are subject to the allocation of revenue and expenses in different jurisdictions and the timing of recognizing revenue and expenses. Significant judgment is required in determining our worldwide provision for income taxes and other tax liabilities. We are subject to income and indirect tax examinations. The Dell-owned EMC consolidated group is routinely under audit by the Internal Revenue Service (the “IRS”). All U.S. federal income tax matters have been concluded for years through 2011, except for any matters under appeal. In addition, we are under corporate income tax audits in various states and non-U.S. jurisdictions. While we believe we have complied with all applicable income tax laws, a governing tax authority could have a different interpretation of the law and assess us with additional taxes. Any assessment of additional taxes could materially affect our financial condition and operating results.

Our future effective tax rate may be affected by such factors as changes in tax laws, changes in our business or statutory rates, changing interpretation of existing laws or regulations, the impact of accounting for stock-based compensation and the recognition of excess tax benefits and tax deficiencies within the income tax provision in the period in which they occur, the impact of accounting for business combinations, shifts in the amount of earnings in the U.S. compared with other regions in the world and overall levels of income before tax, changes in our international organization, as well as the expiration of statute of limitations and settlements of audits.

In addition, in the ordinary course of our global business, there are many intercompany transactions, including the transfer of intellectual property, where the ultimate tax determination is uncertain. Although we believe that our tax estimates are reasonable, the final determination of tax audits or tax disputes may differ from what is reflected in our historical income tax provisions and accruals.

Our rate of taxation in foreign jurisdictions is lower than our U.S. tax rate. Our international income is primarily earned by our subsidiaries organized in Ireland, and, as such, our effective tax rate can be impacted by the composition of our earnings in the U.S. and foreign jurisdictions. During October 2014, Ireland announced revisions to its tax regulations that will require foreign earnings of our subsidiaries organized in Ireland to be taxed at higher rates. We will be impacted by the changes in tax laws in Ireland beginning in 2021. Prior to this date, we may proactively make structural changes in Ireland that may reduce the impact to our future tax rates. Currently, there are certain structural changes in Ireland that may be available to multi-national companies. However, due to the Dell Acquisition, we could be subject to higher tax obligations in the event we executed similar structural changes.

Any other significant changes to U.S. or international tax laws could have a material impact on our effective tax rate, financial condition, operating results and timing and amount of tax payments.

In addition, numerous other countries have recently enacted or are considering enacting changes to tax laws, administrative interpretations, decisions, policies and positions. The Organisation for Economic Co-operation and Development issued guidelines and proposals during October 2015 that may change how our tax obligations are determined in many of the countries in which we do business. These changes could adversely affect our effective tax rate or result in higher cash tax liabilities.

Catastrophic events or geo-political conditions could disrupt our business.

Our corporate headquarters are located in the San Francisco Bay Area, a region known for seismic activity. A significant natural disaster, such as an earthquake, fire, flood or other act of God, could have a material adverse impact on our business and operating results. Abrupt political change, terrorist activity and armed conflict pose a risk of general economic disruption in affected countries, and disease pandemics could temporarily sideline a substantial part of our or our customers’ workforce at any particular time, any of which could disrupt our business. Furthermore, some of our new product initiatives and business functions are hosted and carried out by third parties that may be vulnerable to disruptions of these sorts, many of which may be beyond our control. Unanticipated disruptions in services provided through localized physical infrastructure, such as utility or telecommunication outages, can curtail the functioning of local offices as well as critical components of our information systems, and adversely affect our ability to process orders, provide services, respond to customer requests and maintain local and global business continuity. To the extent that such disruptions result in delays or cancellations of customer orders, or the deployment or availability of our products and services, our revenue would be adversely affected. Additionally, any such catastrophic event could cause us to incur significant costs to repair damages to our facilities, equipment and infrastructure.

Changes in accounting principles and guidance could result in unfavorable accounting charges or effects.

We prepare our consolidated financial statements in accordance with accounting principles generally accepted in the U.S. These principles are subject to interpretation by the SEC and various bodies formed to create and interpret appropriate accounting principles and guidance. A change in these principles or guidance, or in their interpretations, may have a material effect on our reported results, as well as our processes and related controls, and may retroactively affect previously reported results. For example, during May 2014, the Financial Accounting Standards Board (“FASB”) issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606). We will adopt Topic 606 using the full retrospective transition method, effective the first quarter of fiscal 2019. Prior to adoption, we deferred all license revenue related to the sale of perpetual licenses in the event certain revenue recognition criteria were not met. However, under Topic 606, substantially all license revenue related to sale of perpetual licenses is generally expected to be recognized upon delivery. Topic 606 is also expected to impact the timing and recognition of costs to obtain contracts with customers, such as commissions. Under the updated standard, incremental costs to obtain contracts with customers are deferred and recognized over the expected period of benefit. As a result, additional commission costs will be deferred and amortized over a longer duration. We are continuing to evaluate the effect that Topic 606 will have on our financial statements and related disclosures, and preliminary assessments are subject to change.

Additionally, during October 2016, the FASB issued ASU No. 2016-16, Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory (Topic 740), which requires entities to recognize at the transaction date the income tax consequences of intra-entity asset transfers. The updated standard is effective for annual and interim periods beginning after December 15, 2017 and could have a material impact on the Company’s consolidated financial statements due to the changed treatment of the income tax consequences of business combinations and asset transfers with the Company’s international entities.

SEC rules require that when we release our quarterly financial results, we must provide year-over-year comparisons to results for the corresponding quarter of the previous fiscal year. Accordingly, following each quarter of fiscal 2019, we will present quarterly results for the corresponding period of fiscal 2018 that retrospectively apply Topic 606 to our fiscal 2018 results which were originally prepared utilizing the prior accounting guidance. Additionally, we have provided financial guidance for fiscal 2019 and plan to continue to provide guidance for each quarter of fiscal 2019 utilizing comparisons against preliminary retrospective presentations of fiscal 2018 results. These retrospective fiscal 2018 presentations are considered to be preliminary, and are subject to the final retrospective presentations of fiscal 2018 results that we will provide with our annual report on Form 10-K for fiscal 2019. If the final retrospective presentation of our financial statements for fiscal 2018 is perceived by investors to differ significantly from our previously provided preliminary presentations, it may result in fluctuations in our stock price.

Risks Related to Our Relationship with Dell**Our stock price has fluctuated significantly following the announcement of the Dell Acquisition, and our relationship with Dell may adversely impact our business and stock price in the future.**

Our stock price has fluctuated significantly following the announcement of Dell’s acquisition of EMC Corporation, our parent company, in September 2016. Our stock price has been particularly volatile following press reports, subsequently confirmed by Dell in a Schedule 13D/A filing on February 2, 2018, that Dell is evaluating potential business opportunities, including a public offering of Dell, a potential business combination between Dell and VMware, or maintaining the status quo. Speculation regarding the outcome of Dell’s evaluation creates uncertainty for our customers, partners and employees, which could negatively impact sales, make it difficult to attract and retain employees and distract management’s focus from executing on other strategic initiatives.

A number of other factors relating to our future relationship with Dell could adversely affect our business or our stock price in the future, including:

- Dell is able to control matters requiring our stockholders’ approval, including the election of a majority of our directors and the other matters over which EMC formerly had control, as described in the risk factors below.
- Dell could implement changes to our business, including changing our commercial relationship with Dell or taking other corporate actions that our other stockholders may not view as beneficial.
- We have arrangements with a number of companies that compete with Dell, and our relationship with Dell could adversely affect our relationships with these companies or other customers, suppliers and partners.
- Dell has a right to approve certain matters under our certificate of incorporation, including acquisitions or investments in excess of \$100 million, and Dell may choose not to consent to matters that our board of directors believes are in the best interests of VMware.
- We anticipate certain synergies and benefits from the Dell Acquisition that may not be realized.

- In connection with the Dell Acquisition, Dell issued a tracking stock to EMC shareholders, Class V common stock, that is intended to reflect our economic performance as partial consideration to the EMC shareholders. The Class V common stock tracks the performance of an approximately 50% economic interest in our business. The Class V common stock, while not a VMware issued security, increases the supply of publicly traded securities that track VMware's economic performance and may create the perception that the Class V common stock dilutes the holdings of our public stockholders, both of which may put downward pressure on our stock price. Any volatility in the market for Class V common stock could contribute to volatility in the price of VMware Class A common stock.
- Dell is highly leveraged and commits a substantial portion of its cash flows to servicing its indebtedness. Dell's significant debt could create the perception that Dell may exercise its control over us to limit our growth in favor of its other businesses or cause us to transfer cash to Dell. In addition, if Dell defaults, or appears in danger of defaulting, on its indebtedness, the trading price of the Class V common stock issued by Dell would be adversely affected, which could negatively impact the price of our Class A common stock, and uncertainty as to the impact of such a default on VMware could disrupt our business.
- Investor perceptions of Dell's performance, future plans and prospects could contribute to volatility in the price of our Class A common stock
- Some of our products compete directly with products sold or distributed by Dell, which could result in reduced sales.

Holders of our Class A common stock have limited ability to influence matters requiring stockholder approval.

As of February 2, 2018, Dell controlled 30,679,000 shares of our Class A common stock and all 300,000,000 shares of our Class B common stock, representing 81.9% of the total outstanding shares of common stock or 97.6% of the voting power of outstanding common stock held by EMC. Through its control of the Class B common stock, which is generally entitled to 10 votes per share, Dell controls the vote to elect all of our directors and to approve or disapprove all other matters submitted to a stockholder vote.

Prior to a distribution by Dell to its stockholders under Section 355 of the Internal Revenue Code of 1986, as amended (a "355 Distribution"), shares of Class B common stock transferred to any party other than a successor-in-interest or a subsidiary of EMC automatically convert into Class A common stock. Dell's voting control over VMware will continue so long as the shares of Class B common stock it controls continue to represent at least 20% of our outstanding stock. If its ownership falls below 20% of the outstanding shares of our common stock, all outstanding shares of Class B common stock will automatically convert to Class A common stock. If Dell effects a 355 Distribution at a time when it holds shares of Class B common stock, its stockholders will receive Class B common stock. These shares will remain entitled to 10 votes per share, holders of these shares will remain entitled to elect 80% of the total number of directors on our board of directors and the holders of our Class A common stock will continue to have limited ability to influence matters requiring stockholder approval and have limited ability to elect members of our board of directors. Following a 355 Distribution, shares of Class B common stock may convert to Class A common stock if such conversion is approved by VMware stockholders after the 355 Distribution and we have obtained a private letter ruling from the Internal Revenue Service. In January 2014, the IRS announced in Revenue Procedure 2014-3 that, generally, it would no longer issue private letter rulings on 355 Distributions.

Dell has the ability to prevent us from taking actions that might be in our best interest.

Under our certificate of incorporation and the master transaction agreement we entered into with EMC, we must (subject to certain exceptions) obtain the consent of EMC (which is controlled by Dell) or its successor-in-interest, as the holder of our Class B common stock, prior to taking specified actions, such as acquiring other companies for consideration in excess of \$100 million, issuing stock or other VMware securities, except pursuant to employee benefit plans (provided that we obtain Class B common stockholder approval of the aggregate annual number of shares to be granted under such plans), paying dividends, entering into any exclusive or exclusionary arrangement with a third party involving, in whole or in part, products or services that are similar to EMC's or amending certain provisions of our charter documents. In addition, we have agreed that for so long as EMC or its successor-in-interest continues to own greater than 50% of the voting control of our outstanding common stock, we will not knowingly take or fail to take any action that could reasonably be expected to preclude the ability of EMC or its successor-in-interest (including Dell) to undertake a tax-free spin-off. Dell is entitled to exercise the voting control and contractual rights of EMC, and may do so in a manner that could vary significantly from EMC's historic practice. If Dell does not provide any requisite consent allowing us to conduct such activities when requested, we will not be able to conduct such activities. As a result, we may have to forgo capital raising or acquisition opportunities that would otherwise be available to us, and we may be precluded from pursuing certain growth initiatives.

By becoming a stockholder in our company, holders of our Class A common stock are deemed to have notice of and have consented to the provisions of our certificate of incorporation and the master transaction agreement with respect to the limitations that are described above.

Dell has the ability to prevent a change-in-control transaction and may sell control of VMware without benefiting other stockholders.

Dell's voting control and its additional rights described above give Dell the ability to prevent transactions that would result in a change of control of VMware, including transactions in which holders of our Class A common stock might otherwise receive a premium for their shares over the then-current market price. In addition, Dell is not prohibited from selling a controlling interest in us to a third party and may do so without the approval of the holders of our Class A common stock and without providing for a purchase of any shares of Class A common stock held by persons other than Dell. Accordingly, shares of Class A common stock may be worth less than they would be if Dell did not maintain voting control over us or if Dell did not have the additional rights described above.

If Dell's level of ownership significantly increases, Dell could unilaterally effect a merger of VMware into Dell without a vote of VMware stockholders or the VMware Board of Directors at a price per share that might not reflect a premium to then-current market prices.

As of February 2, 2018, Dell controlled 81.9% of VMware's outstanding common stock, and Dell's percentage ownership of VMware common stock could increase as a result of repurchases by VMware of its Class A common stock or purchases by Dell. Section 253 of the Delaware General Corporation Law permits a parent company, when it owns 90% or more of each class of a subsidiary's stock that generally would be entitled to vote on a merger of that subsidiary with the parent, to unilaterally effect a merger of the subsidiary into the parent without a vote of the subsidiary's board or stockholders. Accordingly, if Dell becomes the holder of at least 90% of VMware's outstanding stock, neither VMware's board of directors nor VMware's stockholders would be entitled to vote on a merger of VMware into Dell (the "short-form merger"). Moreover, a short-form merger is not subject to the stringent "entire fairness" standard and the parent company is not required to negotiate with a special committee of disinterested directors that would serve to approximate arm's length negotiations designed to ensure that a fair price is paid. Rather, a minority stockholder's sole remedy in the context of a short-form merger is to exercise appraisal rights under Delaware law. In such a proceeding, petitioning stockholders may be awarded more or less than the merger price or the amount they would have received in a merger negotiated between the parent and a disinterested special committee advised by independent financial and legal advisors. Dell is prohibited through September 7, 2018 under its charter from purchasing or otherwise acquiring any shares of common stock of VMware if such acquisition would cause the common stock of VMware to no longer be publicly traded on a U.S. securities exchange or VMware to no longer be required to file reports under Sections 13 and 15(d) of the Exchange Act, in each case, unless such acquisition of VMware common stock is required in order for VMware to continue to be a member of the affiliated group of corporations filing a consolidated tax return with Dell.

We engage in related persons transactions with Dell that may divert our resources, create opportunity costs and prove to be unsuccessful.

We currently engage in a number of related persons transactions with Dell that include joint product development, go-to-market, branding, sales, customer service activities, real estate and various support services, and we expect to engage in additional related persons transactions with Dell to leverage the benefits of our strategic alignment. Additionally, in 2013 we contributed technology and transferred employees to Pivotal. We continue to hold a significant ownership interest in Pivotal after contributing \$20 million in cash to Pivotal during 2016, in exchange for additional preferred equity interests in Pivotal.

We believe that these related persons transactions provide us a unique opportunity to leverage the respective technical expertise, product strengths and market presence of Dell and its subsidiaries for the benefit of our customers and stockholders while enabling us to compete more effectively with competitors who are much larger than us. However, these transactions may prove not to be successful and may divert our resources or the attention of our management from other opportunities. Negotiating and implementing these arrangements can be time consuming and cause delays in the introduction of joint product and service offerings and disruptions to VMware's business. We cannot predict whether our stockholders and industry or securities analysts who cover us will react positively to announcements of new related persons transactions with Dell, and such announcements could have a negative impact on our stock price. Our participation in these transactions may also cause certain of our other vendors and ecosystem partners who compete with Dell and its subsidiaries to also view us as their competitors. Additionally, if Pivotal requires additional funding, we may be asked to contribute capital resources to Pivotal or accept dilution in our ownership interest, and we may be unable to realize any value from the technology and resources that we contributed to Pivotal.

Our business and Dell's businesses overlap, and Dell may compete with us, which could reduce our market share.

We and Dell are IT infrastructure companies providing products and services that overlap in various areas, including software-based storage, management, hyper-converged infrastructure and cloud computing. Dell competes with us in these areas now and may engage in increased competition with us in the future. In addition, the intellectual property agreement that we have entered into with EMC (which is controlled by Dell) provides EMC the ability to use our source code and intellectual property, which, subject to limitations, it may use to produce certain products that compete with ours. EMC's rights in this

regard extend to its majority-owned subsidiaries, which could include joint ventures where EMC holds a majority position and one or more of our competitors hold minority positions.

Dell could assert control over us in a manner that could impede our growth or our ability to enter new markets or otherwise adversely affect our business. Further, Dell could utilize its control over us to cause us to take or refrain from taking certain actions, including entering into relationships with channel, technology and other marketing partners, enforcing our intellectual property rights or pursuing business combinations, other corporate opportunities (which EMC is expressly permitted to pursue under the circumstances set forth in our certificate of incorporation) or product development initiatives that could adversely affect our competitive position, including our competitive position relative to that of Dell in markets where we compete with Dell. In addition, Dell maintains significant partnerships with certain of our competitors, including Microsoft.

Dell's competition in certain markets may affect our ability to build and maintain partnerships.

Our existing and potential partner relationships may be negatively affected by our relationship with Dell. We partner with a number of companies that compete with Dell in certain markets in which Dell participates. Dell's control of EMC's majority ownership in us may affect our ability to effectively partner with these companies. These companies may favor our competitors because of our relationship with Dell.

Dell competes with certain of our significant channel, technology and other marketing partners, including IBM and Hewlett-Packard. Pursuant to our certificate of incorporation and other agreements that we have with EMC, EMC and Dell may have the ability to impact our relationship with those of our partners that compete with EMC or Dell, which could have a material adverse effect on our operating results and our ability to pursue opportunities which may otherwise be available to us.

We could be held liable for the tax liabilities of other members of Dell's consolidated tax group, and compared to our historical results as a member of the EMC consolidated tax group, our tax liabilities may increase, fluctuate more widely and be less predictable.

We have historically been included in EMC's consolidated group for U.S. federal income tax purposes, as well as in certain consolidated, combined or unitary groups that include EMC Corporation or certain of its subsidiaries for state and local income tax purposes, and since the Dell Acquisition, we have been included in Dell's consolidated tax group. Effective as of the close of the Dell Acquisition, we amended our tax sharing agreement with EMC to include Dell. Although our tax sharing agreement provides that our tax liability is calculated primarily as though VMware were a separate taxpayer, certain tax attributes and transactions are assessed using consolidated tax return rules as applied to the Dell consolidated tax group and are subject to other specialized terms under the tax sharing agreement. Pursuant to our agreement, we and Dell generally will make payments to each other such that, with respect to tax returns for any taxable period in which we or any of our subsidiaries are included in Dell's consolidated group for U.S. federal income tax purposes or any other consolidated, combined or unitary group of Dell or its subsidiaries, the amount of taxes to be paid by us will be determined, subject to certain consolidated return adjustments, as if we and each of our subsidiaries included in such consolidated, combined or unitary group filed our own consolidated, combined or unitary tax return. Consequently, compared to our historical results as a member of the EMC consolidated tax group, the amount of our tax sharing payment compared to our separate return basis liability may increase, vary more widely from period to period and be less predictable. Additionally, the impact of the 2017 Tax Act upon consolidated groups is highly complex and uncertain and its impact must be further interpreted in the context of the tax sharing agreement to determine VMware's tax sharing payment. VMware and Dell are reviewing the tax sharing agreement in connection with the enactment of the 2017 Tax Act.

When we become subject to federal income tax audits as a member of Dell's consolidated group, the tax sharing agreement provides that Dell has authority to control the audit and represent Dell and our interests to the IRS. Accordingly, if we and Dell or its successor-in-interest differ on appropriate responses and positions to take with respect to tax questions that may arise in the course of an audit, our ability to affect the outcome of such audits may be impaired. In addition, if Dell effects a 355 Distribution or other transaction that is subsequently determined to be taxable, we could be liable for all or a portion of the tax liability, which could have a material adverse effect on our operating results and financial condition.

We have been included in the EMC consolidated group for U.S. federal income tax purposes since our acquisition by EMC in 2004, and will continue to be included in Dell's consolidated group for periods in which Dell or its successor-in-interest beneficially owns at least 80% of the total voting power and value of our outstanding stock. Each member of a consolidated group during any part of a consolidated return year is jointly and severally liable for tax on the consolidated return of such year and for any subsequently determined deficiency thereon. Similarly, in some jurisdictions, each member of a consolidated, combined or unitary group for state, local or foreign income tax purposes is jointly and severally liable for the state, local or foreign income tax liability of each other member of the consolidated, combined or unitary group. Accordingly, for any period in which we are included in the Dell consolidated group for U.S. federal income tax purposes or any other consolidated, combined or unitary group of Dell and its subsidiaries, we could be liable in the event that any income tax liability was incurred, but not discharged, by any other member of any such group.

Also, under the tax sharing agreement, if it is subsequently determined that the tracking stock issued in connection with the Dell Acquisition constitutes a taxable distribution, we could be liable for all or a portion of the tax liability, which could have a material adverse effect on our operating results and financial condition.

We have limited ability to resolve favorably any disputes that arise between us and Dell.

Disputes may arise between Dell and us in a number of areas relating to our ongoing relationships, including our reseller, technology and other business agreements with Dell, areas of competitive overlap, strategic initiatives, requests for consent to activities specified in our certificate of incorporation and the terms of our intercompany agreements. We may not be able to resolve any potential conflicts with Dell, and even if we do, the resolution may be less favorable than if we were dealing with an unaffiliated party.

While we are controlled by Dell, we may not have the leverage to negotiate renewals or amendments to these agreements, if required, on terms as favorable to us as those we would negotiate with an unaffiliated third party, if at all.

Our CEO, our CFO and some of our directors have potential conflicts of interest with Dell.

Our CEO, our CFO and some of our directors received shares of Dell Class V common stock in partial consideration for their EMC common stock when the Dell Acquisition closed. In addition, some of our directors are executive officers or directors of Dell, and Dell, through its control of EMC, which is the sole holder of our Class B common stock, is entitled to elect 7 of our 8 directors and possesses sufficient voting control to elect the remaining director. Ownership of Dell Class V common stock by our directors and the presence of executive officers or directors of Dell on our board of directors could create, or appear to create, conflicts of interest with respect to matters involving both us and Dell that could have different implications for Dell than they do for us. Our Board has approved resolutions that address corporate opportunities that are presented to our directors or officers that are also directors or officers of Dell. These provisions may not adequately address potential conflicts of interest or ensure that potential conflicts of interest will be resolved in our favor. As a result, we may not be able to take advantage of corporate opportunities presented to individuals who are officers or directors of both us and Dell and we may be precluded from pursuing certain growth initiatives.

We are a “controlled company” within the meaning of the New York Stock Exchange rules and, as a result, are relying on exemptions from certain corporate governance requirements that provide protection to stockholders of companies that are not “controlled companies.”

Dell owns more than 50% of the total voting power of our common stock and, as a result, we are a “controlled company” under the New York Stock Exchange corporate governance standards. As a controlled company, we are exempt under the New York Stock Exchange standards from the obligation to comply with certain New York Stock Exchange corporate governance requirements, including the requirements:

- that a majority of our board of directors consists of independent directors;
- that we have a corporate governance and nominating committee that is composed entirely of independent directors with a written charter addressing the committee’s purpose and responsibilities;
- that we have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee’s purpose and responsibilities; and
- for an annual performance evaluation of the nominating and governance committee and compensation committee.

While we have voluntarily caused our Compensation and Corporate Governance Committee to currently be composed entirely of independent directors, reflecting the requirements of the New York Stock Exchange, we are not required to maintain the independent composition of the committee. As a result of our use of the “controlled company” exemptions, holders of our Class A common stock will not have the same protection afforded to stockholders of companies that are subject to all of the New York Stock Exchange corporate governance requirements.

Dell’s ability to control our board of directors may make it difficult for us to recruit independent directors.

So long as Dell beneficially owns shares of our common stock representing at least a majority of the votes entitled to be cast by the holders of outstanding voting stock, Dell can effectively control and direct our board of directors. Further, the interests of Dell and our other stockholders may diverge. Under these circumstances, it may become difficult for us to recruit independent directors.

Our historical financial information as a majority-owned subsidiary may not be representative of the results of a completely independent public company.

The financial information covering the periods included in this report does not necessarily reflect what our financial condition, operating results or cash flows would have been had we been a completely independent entity during those periods. In certain geographic regions where we do not have an established legal entity, we contract with Dell subsidiaries for support

services and Dell personnel who are managed by us. The costs incurred by Dell on our behalf related to these employees are passed on to us and we are charged a mark-up intended to approximate costs that would have been charged had we contracted for such services with an unrelated third party. These costs are included as expenses on our consolidated statements of income (loss). Additionally, we engage with Dell in intercompany transactions, including agreements regarding the use of Dell's and our intellectual property and real estate, agreements regarding the sale of goods and services to one another and to Pivotal, and agreements for Dell to resell our products and services to third party customers. If Dell were to distribute its shares of our common stock to its stockholders or otherwise divest itself of all or a significant portion of its VMware shares, there would be numerous implications to us, including the fact that we could lose the benefit of these arrangements with Dell. There can be no assurance that we would be able to renegotiate these arrangements with Dell or replace them on the same or similar terms. Additionally, our business could face significant disruption and uncertainty as we transition from these arrangements with Dell. Moreover, our historical financial information is not necessarily indicative of what our financial condition, operating results or cash flows would be in the future if and when we contract at arm's length with independent third parties for the services we have received and currently receive from Dell. During fiscal 2018, we recognized revenue of \$1,367 million and as of February 2, 2018, \$1,258 million of sales were included in unearned revenue from such transactions with Dell. For additional information, refer to "Our Relationship with Dell" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 and Note B to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

The realignment of our fiscal calendar to coincide with Dell's and Dell's reporting on our financial results may make it more difficult to compare our year-over-year performance and identify changes in business trends and conditions.

Dell provides segment reporting on VMware in its public reports on financial results. However, prior to February 2017, the fiscal calendars for Dell and VMware did not align. VMware reported on a calendar year basis through December 31, 2016, whereas Dell reports on a 52- or 53-week fiscal year basis ending on the Friday nearest to January 31 of each year. Effective January 1, 2017, our fiscal calendar changed to align with Dell's.

The period beginning on January 1, 2017 and ending on February 3, 2017 is being reported as a transition period. Accordingly, our first full fiscal year under our revised fiscal calendar began on February 4, 2017 and ended February 2, 2018.

We have included audited financial statements for the Transition Period in this Form 10-K for fiscal 2018. Following the change in our fiscal calendar and for the first fiscal year, we will compare results from each fiscal period under our new fiscal calendar to the corresponding period under our prior calendar. For example, this Form 10-K compares the results of the first, second, third and fourth quarter of our 2018 fiscal year running from February 4, 2017 through February 2, 2018 to the results of the first, second, third and fourth quarter of our 2016 fiscal year which ran from January 1, 2016 through December 31, 2016, and in accordance with generally accepted accounting practices, we will not denote any full fiscal quarters or a fiscal year as a "2017" fiscal period.

Our fiscal year transition may also distort the impact of seasonal factors that we have observed in our business, such as the end of fiscal period budget expenditures by our customers and the timing of holiday and vacation periods on our quarterly results. Consequently, it may be difficult to accurately determine the extent to which year-over-year changes in our financial results represent actual changes to business conditions and trends or are instead artifacts of our fiscal period transition.

Further, the process of implementing a fiscal calendar transition required us to make adjustments to many of the critical business processes and data systems that our management and personnel rely upon to conduct our business operations and coordinate our worldwide activities. Although we believe that we have successfully managed the transition of our processes and systems to the new fiscal calendar, there can be no assurance that errors and failures will not occur that could impact comparisons of our year-over-year results.

Risks Related to Owning Our Class A Common Stock

The price of our Class A common stock has fluctuated significantly in recent years and may fluctuate significantly in the future.

The trading price of our Class A common stock has fluctuated significantly in the past and could fluctuate substantially in the future due to the factors discussed in this Risk Factors section and elsewhere in this report. The trading market for Dell Class V common stock that was issued upon the closing of the Dell Acquisition that is expected to track the performance of VMware, as well as continuing volatility in technology company share prices, could also lead to volatility in our stock price.

Dell, which beneficially owned 81.9% of our outstanding stock as of February 2, 2018, is not restricted from selling its shares and is entitled to certain registration rights. If a significant number of shares enters the public trading markets in a short period of time, the market price of our Class A common stock may decline. In addition, if our Class B common stock is distributed to Dell stockholders and remains outstanding, it would trade separately from and potentially at a premium to our Class A common stock, and could thereby contribute additional volatility to the price of our Class A common stock.

Broad market and industry factors may also decrease the market price of our Class A common stock, regardless of our actual operating performance. The stock market in general and technology companies in particular have often experienced extreme price and volume fluctuations. Our public float is also relatively small due to Dell's holdings, which can result in greater volatility in our stock compared to that of other companies with a market capitalization similar to ours. It is also uncertain what impact the trading of Dell Class V common stock, which represents approximately 50% of the economic interest in us, will have on the volatility and the liquidity of our Class A common stock and how the Dell Class V common stock will trade in relation to our Class A common stock over time. In addition, in the past, following periods of volatility in the overall market and the market price of a company's securities, securities class action litigation has often been instituted, including against us, and, if not resolved swiftly, can result in substantial costs and a diversion of management's attention and resources.

If securities or industry analysts change their recommendations regarding our stock adversely, our stock price and trading volume could decline.

The trading market for our Class A common stock is influenced by the research and reports that industry or securities analysts publish about us, our business, our market or our competitors. If any of the analysts who cover us or who cover the Dell Class V common stock change their recommendation regarding our stock adversely, or provide more favorable relative recommendations about our competitors, our stock price would likely decline.

Anti-takeover provisions in Delaware law and our charter documents could discourage takeover attempts.

As our controlling stockholder, Dell has the ability to prevent a change in control of VMware. Provisions in our certificate of incorporation and bylaws may also have the effect of delaying or preventing a change of control or changes in our management. These provisions include the following:

- the division of our board of directors into three classes, with each class serving for a staggered three-year term, which prevents stockholders from electing an entirely new board of directors at any annual meeting;
- the right of the board of directors to elect a director to fill a vacancy created by the expansion of the board of directors;
- following a 355 Distribution of Class B common stock by Dell to its stockholders, the restriction that a beneficial owner of 10% or more of our Class B common stock may not vote in any election of directors unless such person or group also owns at least an equivalent percentage of Class A common stock or obtains approval of our board of directors prior to acquiring beneficial ownership of at least 5% of Class B common stock;
- the prohibition of cumulative voting in the election of directors or any other matters, which would otherwise allow less than a majority of stockholders to elect director candidates;
- the requirement for advance notice for nominations for election to the board of directors or for proposing matters that can be acted upon at a stockholders' meeting;
- the ability of the board of directors to issue, without stockholder approval, up to 100,000,000 shares of preferred stock with terms set by the board of directors, which rights could be senior to those of common stock; and
- in the event that Dell or its successor-in-interest no longer owns shares of our common stock representing at least a majority of the votes entitled to be cast in the election of directors, stockholders may not act by written consent and may not call special meetings of the stockholders.

In addition, we have elected to apply the provisions of 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. These provisions in our certificate of incorporation and bylaws and under Delaware law could discourage potential takeover attempts and could reduce the price that investors might be willing to pay for shares of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of February 2, 2018, we owned or leased the facilities described below:

Location		Approximate Sq. Ft.	Principal Use(s)
Palo Alto, CA	owned:	1,592,802 ⁽¹⁾	Executive and administrative offices, sales and marketing, and R&D
North and Latin American region	leased:	1,155,810 ⁽²⁾	Administrative offices, sales and marketing, R&D and data center
Asia Pacific region	leased:	1,295,871	Administrative offices, sales and marketing, R&D and data center
Europe, Middle East and Africa region	leased:	631,593	Administrative offices, sales and marketing, R&D and data center

⁽¹⁾Represents all of the right, title and interest purchased in ground leases, which expire in fiscal 2047, covering the property and improvements located at VMware's Palo Alto, California campus. Of the total square feet owned, approximately 186,000 square feet were under construction as of February 2, 2018.

⁽²⁾ Includes leased space for a Washington data center facility, for which VMware is considered to be the owner for accounting purposes.

We believe that our current facilities are suitable for our current employee headcount and will sustain us through fiscal 2019, but we intend to add new facilities or expand existing facilities as needed as we add employees and expand our operations. We believe that suitable additional or substitute space will be available as needed to accommodate expansion of our operations.

ITEM 3. LEGAL PROCEEDINGS

Refer to Note K to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for a description of legal proceedings. See also the risk factor entitled "We are involved in litigation, investigations and regulatory inquiries and proceedings that could negatively affect us" in Part I, Item 1A of this Annual Report on Form 10-K for a discussion of potential risks to our results of operations and financial condition that may arise from legal proceedings.

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 Class A common stock, par value \$0.01 per share, trades on the New York Stock Exchange under the symbol VMW.

The following table sets forth the range of high and low sales prices of our Class A common stock on the New York Stock Exchange during the fiscal periods shown. Our Class B common stock is not publicly traded.

	Market Prices	
	High	Low
Year ended February 2, 2018		
First Quarter	\$ 94.58	\$ 88.86
Second Quarter	97.40	85.89
Third Quarter	120.97	91.95
Fourth Quarter	150.00	114.54
Transition period		
January 1, 2017 to February 3, 2017	\$ 88.95	\$ 78.88
Year ended December 31, 2016		
First Quarter	\$ 57.27	\$ 43.25
Second Quarter	65.31	49.76
Third Quarter	76.99	56.09
Fourth Quarter	83.00	72.05

Holders

We had 28 holders of record of our Class A common stock, and one holder of record, EMC Corporation, of our Class B common stock as of March 20, 2018 .

Dividends

Subsequent to our initial public offering in August 2007, we have not declared or paid cash dividends on our common stock. We currently do not anticipate declaring any cash dividends in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to the consent of the holders of our Class B common stock pursuant to our certificate of incorporation. Holders of our Class A common stock and our Class B common stock will share equally on a per share basis in any dividend declared on our common stock by our board of directors.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

Issuer purchases of Class A common stock during the quarter ended February 2, 2018 :

	Total Number of Shares Purchased	Average Price Paid Per Share ⁽¹⁾	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Publicly Announced Plans or Programs ⁽²⁾
November 4 – December 1, 2017	1,378,436	\$ 122.58	1,378,436	\$ 876,272,615
December 2 – December 29, 2017	—	—	—	876,272,615
December 30 – February 2, 2018	—	—	—	876,272,615
	<u>1,378,436</u>	<u>\$ 122.58</u>	<u>1,378,436</u>	<u>876,272,615</u>

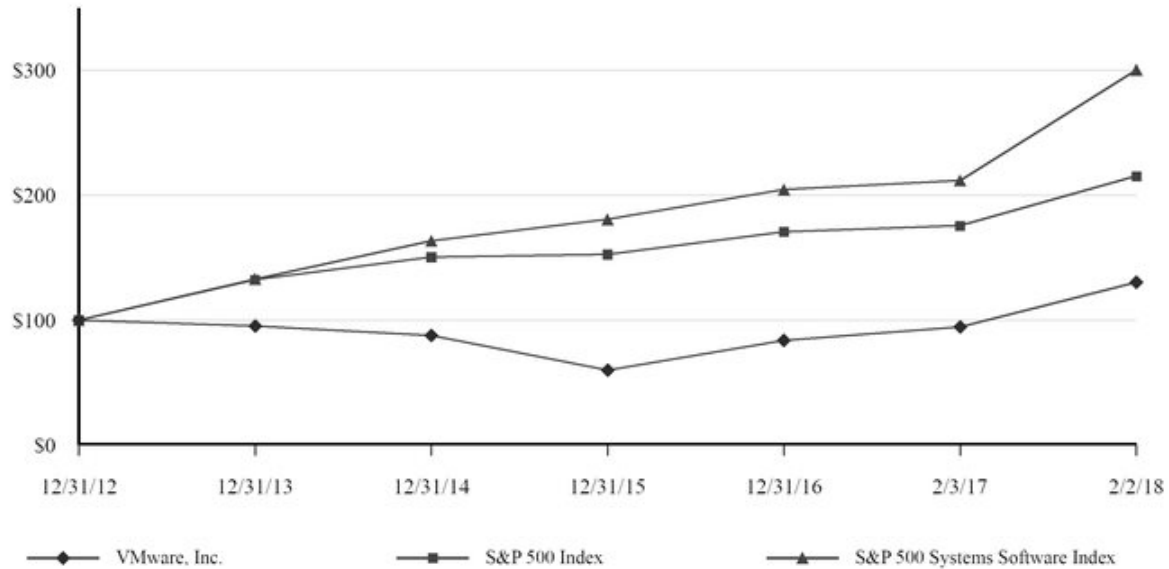
⁽¹⁾ The average price paid per share excludes commissions.

⁽²⁾ Represents the amounts remaining from VMware's \$1,000 million stock repurchase authorization announced on August 14, 2017 that expires on August 31, 2018.

Stock Performance Graph

The graph below compares the cumulative total stockholder return on our Class A common stock with the cumulative total return on the S&P 500 Index and the S&P 500 Systems Software index for the period beginning on December 31, 2012 through February 2, 2018, assuming an initial investment of \$100. Historically, we have not declared or paid cash dividends on our common stock, while the data for the S&P 500 Index and the S&P 500 Systems Software Index assume reinvestment of dividends.

Comparison of Cumulative Five Year Total Return



	Base Period 12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	2/3/2017	2/2/2018
VMware, Inc.	\$ 100.00	\$ 95.29	\$ 87.66	\$ 60.09	\$ 83.63	\$ 94.49	\$ 130.36
S&P 500 Index	100.00	132.39	150.51	152.59	170.84	175.57	215.31
S&P 500 Systems Software Index	100.00	132.90	163.47	180.59	204.49	211.80	300.25

Note: The stock price performance shown on the graph above is not necessarily indicative of future price performance. This graph shall not be deemed “filed” for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities of that section nor shall it be deemed incorporated by reference in any filing under the Securities Act or the Exchange Act, regardless of any general incorporation language in such filing.

ITEM 6. SELECTED FINANCIAL DATA

FIVE-YEAR SELECTED CONSOLIDATED FINANCIAL DATA
(amounts in millions, except per share amounts, and shares in thousands)

	For the Year Ended					Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	December 31, 2014	December 31, 2013	January 1 to February 3, 2017
Results of Operations Data:						
Revenue:						
License	\$ 3,195	\$ 2,794	\$ 2,720	\$ 2,591	\$ 2,270	\$ 125
Services	4,727	4,299	3,927	3,444	2,937	371
GSA settlement	—	—	(76)	—	—	—
Total revenue	\$ 7,922	\$ 7,093	\$ 6,571	\$ 6,035	\$ 5,207	\$ 496
Operating income (loss)	1,689	1,439	1,197	1,027	1,093	(41)
Net income (loss)	570	1,186	997	886	1,014	(8)
Net income (loss) per weighted average share, basic, for Classes A and B	\$ 1.40	\$ 2.82	\$ 2.35	\$ 2.06	\$ 2.36	\$ (0.02)
Net income (loss) per weighted average share, diluted, for Classes A and B	\$ 1.38	\$ 2.78	\$ 2.34	\$ 2.04	\$ 2.34	\$ (0.02)
Weighted average shares, basic, for Classes A and B	406,738	420,520	424,003	430,355	429,093	408,625
Weighted average shares, diluted, for Classes A and B	413,368	423,994	426,547	434,513	433,415	408,625
Cash Flow Data:						
Net cash provided by operating activities	\$ 3,211	\$ 2,381	\$ 1,899	\$ 2,180	\$ 2,535	\$ 361
	February 2, 2018	February 3, 2017	December 31, 2016	December 31, 2015	December 31, 2014	December 31, 2013
Balance Sheet Data:						
Cash, cash equivalents and short-term investments	\$ 11,653	\$ 8,393	\$ 7,985	\$ 7,509	\$ 7,075	\$ 6,175
Working capital	8,701	5,562	5,781	5,231	4,886	4,198
Total assets	20,622	16,397	16,643	15,746	15,216	12,327
Total unearned revenue	6,250	5,340	5,624	5,076	4,833	4,092
Long-term obligations ⁽¹⁾⁽²⁾	4,234	1,500	1,500	1,500	1,500	450
Total stockholders' equity	7,776	8,216	8,097	7,923	7,586	6,816

⁽¹⁾On January 21, 2014, in connection with our agreement to acquire A.W.S. Holding, LLC, the sole member and equity holder of AirWatch LLC, we entered into a note exchange agreement with Dell (formerly EMC Corporation) providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million. The total debt of \$1,500 million includes \$450 million that was exchanged for the \$450 million promissory note outstanding in prior years. Refer to Note B to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

⁽²⁾On August 21, 2017, we issued three series of unsecured senior notes pursuant to a public debt offering in an aggregate amount of \$4,000 million, which consisted of outstanding principal due on the following dates: \$1,250 million due August 21, 2020, \$1,500 million due August 21, 2022 and \$1,250 million due August 21, 2027. Upon closing, a portion of the net proceeds from the offering was used to repay two of the notes payable to Dell due May 1, 2018 and May 1, 2020 in the aggregate principal amount of \$1,230 million. Refer to Note G to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following management's discussion and analysis ("MD&A") is provided in addition to the accompanying consolidated financial statements and notes to assist in understanding our results of operations and financial condition.

Period-over-period changes are calculated based upon the respective underlying, non-rounded data. We refer to our fiscal years ended February 1, 2019, February 2, 2018, December 31, 2016 and December 31, 2015 as "fiscal 2019," "fiscal 2018," "fiscal 2016" and "fiscal 2015," respectively. Unless the context requires otherwise, we are referring to VMware, Inc. and its consolidated subsidiaries when we use the terms "VMware," the "Company," "we," "our" or "us."

Overview

We pioneered the development and application of virtualization technologies with x86 server-based computing, separating application software from the underlying hardware. Information technology ("IT") driven innovation is disrupting markets and industries. Technologies emerge faster than organizations can absorb, creating increasingly complex environments. To take on this challenge, businesses need a flexible and secure digital foundation. We provide compute, cloud, mobility, networking and security infrastructure software to businesses that provides a flexible digital foundation for the applications that empower businesses to serve their customers globally.

Over the years, we have increased our product and solution offerings beyond compute virtualization to include offerings that allow organizations to manage information technology resources across private clouds and complex multi-cloud, multi-device environments by leveraging synergies across three product categories: Software-Defined Data Center ("SDDC"), Hybrid Cloud Computing and End-User Computing ("EUC"). Our portfolio supports and addresses the four key IT priorities of our customers: modernizing data centers, integrating public clouds, empowering digital workspaces and transforming security.

We sell our solutions using enterprise agreements ("EAs") or as part of our non-EA, or transactional, business. EAs are comprehensive volume license offerings, offered both directly by us and through certain channel partners that also provide for multi-year maintenance and support. We continue to experience strong renewals, including renewals of our EAs, resulting in additional license sales of both our existing and newer products and solutions.

SDDC or Software-Defined Data Center

Our SDDC technologies form the foundation of our customers' private cloud environments and provide the capabilities for our customers to extend their private cloud to the public cloud and to help them run, manage, secure and connect all their applications across all clouds and devices. During fiscal 2018, we continued to see broad-based strength of our SDDC solutions. While our compute license sales remained stable, sales of our VMware NSX ("NSX") and VMware vSAN ("vSAN"), including VxRail offerings, continued to grow during fiscal 2018. While sales from our management products increased during fiscal 2018, the sales growth rate fluctuated period to period, depending largely upon the extent to which management products were included in our particular larger EAs. Future growth rates for our management products may be subject to similar variability.

Hybrid Cloud Computing

Our overarching cloud strategy contains three key components: (i) continue to expand beyond compute virtualization in the private cloud, (ii) extend the private cloud into the public cloud and (iii) connect and secure endpoints across a range of public clouds. During fiscal 2018, Hybrid Cloud Computing was comprised of VMware Cloud Provider Program ("VCP") (previously referred to as VMware vCloud Air Network) and VMware Cloud Services, which enable customers to run, manage, connect and secure their applications across private and public clouds, including Amazon Web Services ("AWS"), Azure, Google Cloud Platform and IBM Cloud. During fiscal 2018, revenue growth in our Hybrid Cloud Computing offerings was primarily driven by our VCP offerings. VMware Cloud on AWS is currently available in certain geographies, and we expect to continue expanding into additional regions in fiscal 2019.

During the second quarter of fiscal 2018, we completed the sale of our vCloud Air business ("vCloud Air") to OVH US LLC ("OVH").

End-User Computing

Our EUC solution consists of VMware Workspace ONE ("Workspace ONE"), our digital workspace platform, which includes VMware AirWatch ("AirWatch") and VMware Horizon. Our AirWatch business model includes an on-premises solution that we offer through the sale of perpetual licenses and an off-premises solution that we offer as software-as-a-service ("SaaS"). Workspace ONE continued to be our primary growth driver within our EUC product group during fiscal 2018.

Dell Synergies

During fiscal 2018, we continued joint marketing, sales, branding and product development efforts with Dell Technologies Inc. (“Dell”) and other Dell Technologies companies to enhance the collective value we deliver to our mutual customers. As a result of our collective business built with Dell, we have experienced significant synergies benefiting our sales during fiscal 2018.

Change in Fiscal Year End

As a result of the change to our fiscal year from a fiscal year ending on December 31 of each calendar year to a fiscal year ending on the Friday nearest to January 31 of each year, the period that began on January 1, 2017 and ended on February 3, 2017 was a transition period (the “Transition Period”). Our first full fiscal year 2018 is a 52-week year that began on February 4, 2017 and ended on February 2, 2018. Prior-period financial statements have not been recast as we believe (i) the year ended December 31, 2016 is comparable to the year ended February 2, 2018 and (ii) recasting prior-period results was not practicable or cost justified. We have included audited consolidated financial statements for the Transition Period in Part II, Item 8 of this Annual Report on Form 10-K.

Results of Operations

Approximately 70% of our sales are denominated in the United States (“U.S.”) dollar, however, in certain countries we also invoice and collect in the following currencies: euro; British pound; Japanese yen; Australian dollar; and Chinese renminbi. In addition, we incur and pay operating expenses in currencies other than the U.S. dollar. As a result, our financial statements, including our revenue, operating expenses, unearned revenue and the resulting cash flows derived from the U.S. dollar equivalent of foreign currency transactions, are affected by foreign exchange fluctuations.

Revenue

Our revenue during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 2, 2018	December 31, 2016	December 31, 2015	2018 vs. 2016		2016 vs. 2015	
				\$ Change	% Change	\$ Change	% Change
Revenue:							
License	\$ 3,195	\$ 2,794	\$ 2,720	\$ 401	14%	\$ 74	3%
Services:							
Software maintenance	4,088	3,740	3,405	348	9	335	10
Professional services	639	559	522	80	14	37	7
Total services	4,727	4,299	3,927	428	10	372	9
GSA settlement	—	—	(76)	—	n/a	76	n/a
Total revenue	\$ 7,922	\$ 7,093	\$ 6,571	\$ 829	12	\$ 522	8
Revenue:							
United States	\$ 3,911	\$ 3,588	\$ 3,311	\$ 323	9%	\$ 277	8%
International	4,011	3,505	3,260	506	14	245	8
Total revenue	\$ 7,922	\$ 7,093	\$ 6,571	\$ 829	12	\$ 522	8

Revenue from our Hybrid Cloud Computing offerings consisted primarily of VCPP, and revenue from our SaaS offerings consisted primarily of our AirWatch mobile solution within Workspace ONE. VCPP revenue is included in license revenue and SaaS revenue is included in both license and services revenue. Hybrid Cloud Computing, together with our SaaS offerings, accounted for approximately 8% of our total revenue during fiscal years 2018 and 2016.

License revenue relating to the sale of perpetual licenses that are part of a multi-year arrangement is generally recognized upon delivery of the underlying license, whereas revenue derived from our Hybrid Cloud Computing and SaaS offerings is recognized on a consumption basis or over a period of time.

License Revenue

During fiscal 2018, license revenue benefited from broad-based growth across our diverse portfolio and solid performance in all geographies. Drivers of license revenue growth during fiscal 2018 compared to fiscal 2016 included continued scale and

growth of our NSX and vSAN offerings. EUC growth driven in part by sales of Workspace ONE and continued strength of our VCPP offerings were also key factors contributing to license growth. Strength in our renewal business, including EAs, also contributed to license revenue growth during fiscal 2018 compared to fiscal 2016.

License revenue growth in fiscal 2016 compared to fiscal 2015 was largely driven by license sales of NSX, vSAN and AirWatch mobile solutions, as well as growth in our VCPP offering. We experienced stronger than expected sales of our compute products, in part due to strong renewals of our EAs, which also contributed to the license revenue growth in fiscal 2016 compared to fiscal 2015.

Services Revenue

During fiscal 2018 and fiscal 2016, software maintenance revenue benefited from strong renewals of our EAs, maintenance contracts sold in previous periods and additional maintenance contracts sold in conjunction with new software license sales. In each period presented, customers purchased, on a weighted-average basis, more than two and a half years of support and maintenance with each new license purchased.

Professional services revenue increased 14% in fiscal 2018 and 7% in fiscal 2016. We have continued our focus on solution deployments, including our products such as NSX and vSAN, which attributed to the increase in professional services revenue. Our professional services revenue will vary based on the delivery channels used in any given period as well as the timing of service engagements.

GSA Settlement

During fiscal 2015, we reached an agreement with the Department of Justice and the General Services Administration (“GSA”) to pay \$76 million to resolve allegations that our government sales practices between 2006 and 2013 had violated the federal False Claims Act. The settlement was paid and recorded as a reduction of our total revenue during fiscal 2015.

Unearned Revenue

Unearned revenue as of the periods presented consisted of the following (table in millions):

	February 2, 2018	February 3, 2017
Unearned license revenue	\$ 523	\$ 484
Unearned software maintenance revenue	5,141	4,405
Unearned professional services revenue	586	451
Total unearned revenue	\$ 6,250	\$ 5,340

Unearned license revenue is generally recognized upon delivery of existing or future products or services, or is otherwise recognized ratably over the term of the arrangement. Future products include, in some cases, emerging products that are offered as part of product promotions where the purchaser of an existing product is entitled to receive the future product at no additional charge. To the extent the future product has not been delivered and vendor-specific objective evidence (“VSOE”) of fair value cannot be established, revenue for the entire order is deferred until all product delivery obligations have been fulfilled. In the event the arrangement does not include professional services and if the customer is granted the right to receive unspecified future products or VSOE of fair value on the software maintenance element of the arrangement does not exist, then unearned license revenue may also be recognized ratably. Unearned license revenue derived from commitments to future products that have not been delivered represents a significant portion of total unearned license revenue as of February 2, 2018 and February 3, 2017. Upon adoption of Topic 606, unearned license revenue is expected to substantially decline primarily due to the acceleration of revenue recognition for on-premise license sales that were deferred under current accounting guidance and due to customer prepayments on contracts with various cancellation rights.

Unearned software maintenance revenue is attributable to our maintenance contracts and is generally recognized ratably over the contract period. The weighted-average remaining term as of February 2, 2018 was approximately two years. Unearned professional services revenue results primarily from prepaid professional services, including training, and is generally recognized as the services are delivered. The amount of unearned revenue derived from transactions denominated in a foreign currency is affected by fluctuations in the foreign currencies in which we invoice.

In connection with the disposition of vCloud Air, \$35 million of total unearned revenue, which included \$18 million of unearned license revenue, was transferred to OVH during the second quarter of fiscal 2018. Refer to Note D to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion.

Cost of License Revenue, Cost of Services Revenue and Operating Expenses

Our cost of services revenue and operating expenses primarily reflected increasing cash-based employee-related expenses, driven by incremental growth in headcount and increasing compensation across most of our income statement expense categories during fiscal 2018. We expect increases in cash-based employee-related expenses to continue.

Cost of License Revenue

Cost of license revenue primarily consists of the cost of fulfillment of our software, royalty costs in connection with technology licensed from third-party providers and amortization of intangible assets. The cost of fulfillment of our software includes personnel costs and related overhead associated with the physical and electronic delivery of our software products.

Cost of license revenue during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 2,	December 31,	December 31,	2018 vs. 2016		2016 vs. 2015	
	2018	2016	2015	\$ Change	% Change	\$ Change	% Change
Cost of license revenue	\$ 155	\$ 157	\$ 184	\$ (2)	(1)%	\$ (27)	(15)%
Stock-based compensation	2	2	2	—	(21)	—	5
Total expenses	\$ 157	\$ 159	\$ 186	\$ (2)	(1)	\$ (27)	(14)
% of License revenue	5%	6%	7%				

Cost of license revenue decreased in fiscal 2016 compared to fiscal 2015 primarily due to a decrease in royalty costs of \$16 million and amortization of intangible assets of \$7 million.

Cost of Services Revenue

Cost of services revenue primarily includes the costs of personnel and related overhead to physically and electronically deliver technical support for our products and to provide professional services. Additionally, cost of services revenue includes depreciation on equipment supporting our service offerings.

Cost of services revenue during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 2,	December 31,	December 31,	2018 vs. 2016		2016 vs. 2015	
	2018	2016	2015	\$ Change	% Change	\$ Change	% Change
Cost of services revenue	\$ 934	\$ 842	\$ 788	\$ 91	11 %	\$ 54	7%
Stock-based compensation	50	52	44	(1)	(2)	8	19
Total expenses	\$ 984	\$ 894	\$ 832	\$ 90	10	\$ 63	8
% of Services revenue	21%	21%	21%				

Cost of services revenue increased in fiscal 2018 compared to fiscal 2016, but remained consistent as a percentage of revenue. The increase was primarily due to growth in cash-based employee-related expenses of \$81 million during fiscal 2018, driven by incremental growth in headcount and salaries, as well as increased IT development costs of \$24 million. These increased costs were offset in part by a decrease in equipment, depreciation and facilities-related costs of \$33 million.

Cost of services revenue increased in fiscal 2016 compared to fiscal 2015. The increase was primarily due to growth in cash-based employee-related expenses of \$69 million, driven by incremental growth in headcount and salaries. In addition, stock-based compensation increased by \$8 million, primarily driven by an increase in restricted stock unit awards granted.

Research and Development Expenses

Research and development expenses include the personnel and related overhead associated with the development of our product software and service offerings. We continue to invest in our key growth areas, including NSX and vSAN, while also investing in areas that we expect to be significant growth drivers in future periods.

Research and development expenses during the periods presented were as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 2,	December 31,	December 31,	2018 vs. 2016		2016 vs. 2015	
	2018	2016	2015	\$ Change	% Change	\$ Change	% Change
Research and development	\$ 1,400	\$ 1,198	\$ 1,074	\$ 203	17%	\$ 124	12%
Stock-based compensation	355	305	226	49	16	80	35
Total expenses	\$ 1,755	\$ 1,503	\$ 1,300	\$ 252	17	\$ 203	16
% of Total revenue	22%	21%	20%				

Research and development expenses increased in fiscal 2018 compared to fiscal 2016 . The increase was primarily due to growth in cash-based employee-related expenses of \$194 million, driven by incremental growth in headcount and salaries. In addition, stock-based compensation increased by \$49 million, primarily driven by an increase in restricted stock unit awards and performance stock unit awards granted after the fourth quarter of fiscal 2016. Research and development expenses also increased due to higher equipment, depreciation and facilities-related costs of \$34 million. These increases were offset in part by an increase in capitalized internal-use software development costs of \$55 million.

Research and development expenses increased in fiscal 2016 compared to fiscal 2015. The increase was primarily due to growth in cash-based employee-related expenses of \$120 million, driven by incremental growth in headcount and salaries. In addition, stock-based compensation increased by \$80 million, primarily driven by an increase in restricted stock unit awards granted.

Sales and Marketing Expenses

Sales and marketing expenses include personnel costs, sales commissions and related overhead associated with the sale and marketing of our license and services offerings, as well as the cost of product launches and marketing initiatives. Sales commissions for our license offerings are generally earned and expensed when a firm order is received from the customer. In the event of an EA with multi-year support and maintenance or our SaaS offerings, sales commissions are generally expensed over the term of the arrangement.

The adoption of Topic 606 is expected to impact the timing and recognition of costs to obtain contracts with customers, such as commissions. Incremental costs to obtain contracts with customers are deferred and recognized over the expected period of benefit. As a result, additional commission costs will be deferred and amortized over a longer duration.

Sales and marketing expenses during the periods presented were as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 2,	December 31,	December 31,	2018 vs. 2016		2016 vs. 2015	
	2018	2016	2015	\$ Change	% Change	\$ Change	% Change
Sales and marketing	\$ 2,396	\$ 2,162	\$ 2,099	\$ 235	11%	\$ 61	3%
Stock-based compensation	197	195	168	1	1	28	16
Total expenses	\$ 2,593	\$ 2,357	\$ 2,267	\$ 236	10	\$ 88	4
% of Total revenue	33%	33%	35%				

Sales and marketing expenses increased in fiscal 2018 compared to fiscal 2016 . The increase was primarily due to growth in cash-based employee-related expenses of \$233 million, driven by incremental growth in headcount and salaries, as well as higher commission costs, resulting from increased sales volume.

Sales and marketing expenses increased in fiscal 2016 compared to fiscal 2015. The increase was primarily due to growth in cash-based employee-related expenses of \$134 million, driven by incremental growth in headcount and salaries, as well as higher sales commission expense resulting from increased sales volume. In addition, stock-based compensation increased by \$28 million, primarily driven by an increase in restricted stock unit awards granted. These increases were partially offset by decreases in costs incurred for marketing programs and related initiatives of \$45 million. In addition, sales and marketing expenses decreased by \$28 million due to fluctuations in the exchange rates for foreign currencies in which we incur expenses.

General and Administrative Expenses

General and administrative expenses include personnel and related overhead costs to support the business. These expenses include the costs associated with finance, human resources, IT infrastructure and legal, as well as expenses related to corporate costs and initiatives, including certain charitable donations to the VMware Foundation.

General and administrative expenses during the periods presented were as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 2,	December 31,	December 31,	2018 vs. 2016		2016 vs. 2015	
	2018	2016	2015	\$ Change	% Change	\$ Change	% Change
General and administrative	\$ 575	\$ 607	\$ 702	\$ (32)	(5)%	\$ (94)	(13)%
Stock-based compensation	79	82	64	(2)	(3)	17	27
Total expenses	\$ 654	\$ 689	\$ 766	\$ (35)	(5)	\$ (77)	(10)
% of Total revenue	8%	10%	12%				

General and administrative expenses decreased in fiscal 2018 compared to fiscal 2016. The decrease was primarily driven by a decrease in IT-related costs, including telecommunication, equipment and depreciation, of \$73 million, offset in part by decreased capitalization of internal-use software development costs of \$27 million, as well as increased cash-based employee-related expenses of \$33 million, resulting primarily from incremental growth in headcount and salaries.

General and administrative expenses decreased in fiscal 2016 compared to fiscal 2015. The decrease was primarily driven by a decrease in installment payments to certain key employees of AirWatch that were subject to the achievement of specified employment conditions, with the final installment payment occurring during the first quarter of 2016. As a result, compensation expense relating to these installment payments decreased by \$132 million in 2016. These decreases in general and administrative expenses were partially offset by an increase in equipment, depreciation and facilities-related costs of \$36 million. In addition, cash-based employee-related expenses increased by \$32 million, driven by incremental growth in headcount and salaries, and stock-based compensation increased by \$17 million, primarily due to an increase in restricted stock unit awards granted.

Realignment and Loss on Disposition

Realignment expenses and loss on disposition during the periods presented were as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 2,	December 31,	December 31,	2018 vs. 2016		2016 vs. 2015	
	2018	2016	2015	\$ Change	% Change	\$ Change	% Change
Realignment and loss on disposition	\$ 90	\$ 52	\$ 23	\$ 38	73%	\$ 29	126%
% of Total revenue	1%	1%	—%				

During the second quarter of fiscal 2018, we completed the sale of vCloud Air to OVH. Losses recognized in connection with this transaction were \$90 million during fiscal 2018. Losses recognized on the disposition of vCloud Air include the impairment of fixed assets identified as part of the sale, as well as the costs associated with certain transition services, which primarily include employee-related expenses and costs associated with data-center colocation services. Transition services are to be provided over a period of 18 months, starting from the date of the sale.

On January 22, 2016, we approved a plan to streamline our operations, with plans to reinvest the associated savings in field, technical and support resources associated with growth products. As a result of these actions, approximately 800 positions were eliminated during fiscal 2016. We recognized \$50 million of severance-related realignment expenses during fiscal 2016 on the consolidated statements of income (loss). Additionally, we consolidated certain facilities as part of this plan, which resulted in the recognition of \$2 million of related expenses during fiscal 2016. Actions associated with this plan were substantially completed by December 31, 2016.

During fiscal 2015, we eliminated approximately 380 positions across all major functional groups and geographies to streamline our operations. As a result of these actions, \$23 million of realignment expenses were recognized during fiscal 2015.

Investment Income

Investment income during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 2,	December 31,	December 31,	2018 vs. 2016		2016 vs. 2015	
	2018	2016	2015	\$ Change	% Change	\$ Change	% Change
Investment income	\$ 120	77	\$ 49	\$ 42	55%	\$ 28	57%
% of Total revenue	2%	1%	1%				

Investment income increased in fiscal 2018 compared to fiscal 2016 and fiscal 2016 compared to fiscal 2015, primarily as a result of increased interest income earned on our short-term investments resulting from both higher yields and higher invested balances.

Interest expense

Interest expense during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 2,	December 31,	December 31,	2018 vs. 2016		2016 vs. 2015	
	2018	2016	2015	\$ Change	% Change	\$ Change	% Change
Interest expense	\$ (74)	\$ (26)	\$ (26)	\$ (48)	183%	\$ —	\$ —
% of Total revenue	1%	— %	— %				

On August 21, 2017, we issued three series of unsecured senior notes (“Senior Notes”) pursuant to a public debt offering in the aggregate amount of \$4,000 million. Upon closing, a portion of the net proceeds from the offering was used to repay two of the notes payable to Dell in the aggregate principal amount of \$1,230 million. Interest expense increased by \$48 million in fiscal 2018 compared to fiscal 2016, due to the issuance of the Senior Notes, offset in part by a reduction in interest expense on the notes payable to Dell. We expect interest expense for fiscal 2019 to be approximately \$130 million.

Other Income (Expense), net

Other income (expense), net during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 2,	December 31,	December 31,	2018 vs. 2016		2016 vs. 2015	
	2018	2016	2015	\$ Change	% Change	\$ Change	% Change
Other income (expense), net	\$ 66	\$ (17)	\$ (7)	\$ 84	(479)%	\$ (11)	166%
% of Total revenue	1%	— %	— %				

During fiscal 2018, we completed two step acquisitions, Wavefront, Inc. (“Wavefront”) and Velocloud Networks, Inc., which resulted in an aggregate gain of \$42 million reported in other income (expense), net for the remeasurement of our respective ownership interest in each company.

During the third quarter of fiscal 2018, we repaid two of the notes payable to Dell in the aggregate principal amount of \$1,230 million, representing repayment of the note due May 1, 2018 at par value and repayment of the note due May 1, 2020 at a discount. During fiscal 2018, we recognized a gain on extinguishment of debt of \$6 million, which was recorded in other income (expense), net.

The increase in other income (expense), net during fiscal 2018 as compared to fiscal 2016 was also driven by gains and losses on foreign currency exchange.

Transition Period

In conjunction with our change in fiscal year end, we had a Transition Period of 34 days that began on January 1, 2017 and ended on February 3, 2017. The most comparable prior-year period, the one month ended January 31, 2016, had a duration of 31 days.

The following table presents certain financial information during the periods presented (table in millions):

	Transition Period January 1 to February 3, 2017	Comparable Period January 1 to January 31, 2016
Total revenue	\$ 496	\$ 470
Operating income (loss)	(41)	22
Income tax provision (benefit)	(26)	4
Net income (loss)	(8)	22

During the Transition Period, total revenue increased and license sales declined when compared to the one-month period ended January 31, 2016. Operating loss during the Transition Period reflected costs related to our global sales event, as well as increases in employee-related expenses compared to the one month ended January 31, 2016. Factors contributing to the increase in employee-related expenses include both incremental headcount and costs associated with three additional days of expense included in the Transition Period.

The income tax benefit recognized during the Transition Period was driven by the pre-tax loss incurred during the period and our Internal Revenue Code Section 199 deduction (“Deduction”), which reflected the impact of claiming a higher Deduction for two of our U.S. tax return periods compared to the Deduction for fiscal 2016, which was calculated on a separate return basis. Two tax returns were required, with the first covering the period prior to the Dell acquisition from January 1, 2016 to September 7, 2016 and the second covering the period following the Dell Acquisition through Dell’s fiscal 2017 which ended on February 3, 2017. The Deduction was greater during the two U.S. tax return periods due to higher taxable income resulting from the acceleration of income recognized from unearned revenue for tax purposes.

Income Tax Provision

Our annual effective income tax rate was 68.4% , 19.5% , and 17.8% during fiscal 2018, 2016 and 2015, respectively. Our effective income tax rate in fiscal 2018 was substantially higher primarily due to approximately \$970 million relating to the estimated effects of the U.S. Tax Cuts and Jobs Act enacted on December 22, 2017 (the “2017 Tax Act”).

Key components of the tax expense relating to the 2017 Tax Act included provisional estimates for the mandatory one-time transition tax on accumulated earnings of foreign subsidiaries of approximately \$800 million , and the remeasurement of our deferred tax assets and liabilities of approximately \$170 million resulting from the reduction in the U.S. statutory corporate tax rate from 35% to 21%, effective January 1, 2018. The reduction in the U.S. statutory corporate tax rate resulted in a blended U.S. statutory corporate tax rate of 34% during fiscal 2018.

Our tax expense in fiscal 2018 benefited from the recognition of excess tax benefits of \$106 million , in connection with our adoption of Accounting Standards Update (“ASU”) No. 2016-09, Compensation-Stock Compensation (Topic 718) during the first quarter of fiscal 2018. Previously, the excess tax benefits were recognized in additional paid-in capital on the consolidated balance sheets.

Our effective income tax rate in fiscal 2016 was higher than in fiscal 2015 primarily as a result of a shift in mix of earnings from our lower tax non-U.S. jurisdictions to the U.S. This impact from the shift in mix of earnings was partially offset by the favorable impact of lower unrecognized tax benefit additions recorded in fiscal 2016 as compared to fiscal 2015.

For the periods presented, our rate of taxation in non-U.S. jurisdictions was lower than our U.S. tax rate. Our non-U.S. earnings are primarily earned by our subsidiaries organized in Ireland, and as such, our annual effective tax rate can be significantly affected by the composition of our earnings in the U.S. and non-U.S. jurisdictions.

We are included in Dell’s consolidated tax group for U.S. federal income tax purposes and will continue to be included in Dell’s consolidated group for periods in which Dell beneficially owns at least 80% of the total voting power and value of our combined outstanding Class A and Class B common stock as calculated for U.S. federal income tax purposes. The percentage of voting power and value calculated for U.S. federal income tax purposes may differ from the percentage of outstanding shares beneficially owned by Dell due to the greater voting power of our Class B common stock as compared to our Class A common stock and other factors. Each member of a consolidated group during any part of a consolidated return year is jointly and severally liable for tax on the consolidated return of such year and for any subsequently determined deficiency thereon. Should Dell’s ownership fall below 80% of the total voting power or value of our outstanding stock in any period, then we would no longer be included in the Dell consolidated group for U.S. federal income tax purposes, and our U.S. federal income tax would be reported separately from that of the Dell consolidated group.

Although our results are included in the Dell consolidated return for U.S. federal income tax purposes, our income tax provision, including provisional estimates of taxes relating to the 2017 Tax Act, is calculated primarily as though we were a separate taxpayer. However, under certain circumstances, transactions between us and Dell are assessed using consolidated tax return rules.

Our future effective tax rate will benefit significantly from certain provisions of the 2017 Tax Act, including the reduction in the U.S. statutory corporate tax rate. However, the effect of the Global Intangible Low-Taxed Income tax and the base erosion tax, as well as changes to our provisional accounting for the effects of the 2017 Tax Act during the measurement period, on our future effective tax rate is uncertain. Our future effective tax rate may also be affected by such factors as changes in tax laws, changes in our business or statutory rates, changing interpretation of existing laws or regulations, the impact of accounting for stock-based compensation and the recognition of excess tax benefits and tax deficiencies within the income tax provision in the period in which they occur, the impact of accounting for business combinations, changes in the composition of earnings in the U.S. compared with other regions in the world and overall levels of income before tax, changes in our international organization, as well as the expiration of statute of limitations and settlements of audits.

Our Relationship with Dell

As of February 2, 2018, Dell controlled 31 million shares of Class A common stock and all 300 million shares of Class B common stock, representing 81.9% of our total outstanding shares of common stock and 97.6% of the combined voting power of our outstanding common stock. For a description of related risks, refer to “Risks Related to Our Relationship with Dell” in Part I, Item 1A of this Annual Report on Form 10-K.

The information provided below includes a summary of the transactions entered into with Dell and Dell’s consolidated subsidiaries, including EMC (collectively, “Dell”) from the effective date of the Dell Acquisition through February 2, 2018. Transactions prior to the effective date of the Dell Acquisition reflect transactions only with EMC and its consolidated subsidiaries.

Transactions with Dell

We engaged with Dell in the following ongoing intercompany transactions, which resulted in revenue and receipts and unearned revenue for us:

- Pursuant to OEM and reseller arrangements, Dell integrates or bundles our products and services with Dell’s products and sells them to end users. Dell also acts as a distributor, purchasing our standalone products and services for resale to end-user customers through VMware-authorized resellers. Revenue under these arrangements is presented net of related marketing development funds and rebates paid to Dell.
- Dell purchases products and services from us for its internal use.
- We provide professional services to end users based upon contractual agreements with Dell.
- Pursuant to an ongoing distribution agreement, we act as the selling agent for certain products and services of Pivotal Software, Inc. (“Pivotal”), a subsidiary of Dell, in exchange for an agency fee. Under this agreement, cash is collected from the end user by us and remitted to Pivotal, net of the contractual agency fee.
- We provide various services to Pivotal. Support costs incurred by us are reimbursed to us and are recorded as a reduction to the costs incurred by us.

Dell purchases our products and services directly from us, as well as through our channel partners. Information about our revenue and receipts, and unearned revenue from such arrangements, for the periods presented consisted of the following (table in millions):

	Revenue and Receipts				Unearned Revenue	
	For the Year Ended			Transition Period	As of	
	February 2,	December 31,	December 31,	January 1 to	February 2,	February 3,
	2018	2016	2015	February 3,	2018	2017
				2017		
Reseller revenue	\$ 1,220	\$ 508	\$ 301	\$ 44	\$ 1,248	\$ 616
Internal-use revenue	40	35	17	7	10	18
Professional services revenue	105	115	100	3	—	—
Agency fee revenue	2	4	6	—	—	—
Reimbursement for services to Pivotal	—	1	4	—	n/a	n/a

We engaged with Dell in the following ongoing intercompany transactions, which resulted in costs to us:

- We purchase and lease products and purchase services from Dell.
- From time to time, we and Dell enter into agreements to collaborate on technology projects, and we pay Dell for services provided to us by Dell related to such projects.
- In certain geographic regions where we do not have an established legal entity, we contract with Dell subsidiaries for support services and support from Dell personnel who are managed by us. The costs incurred by Dell on our behalf related to these employees are charged to us with a mark-up intended to approximate costs that would have been incurred had we contracted for such services with an unrelated third party. These costs are included as expenses on our consolidated statements of income (loss) and primarily include salaries, benefits, travel and occupancy expenses. Dell also incurs certain administrative costs on our behalf in the U.S. that are recorded as expenses on our consolidated statements of income (loss).
- From time to time, we invoice end users on behalf of Dell for certain services rendered by Dell. Cash related to these services is collected from the end user by us and remitted to Dell.

Information about our costs from such arrangements during the periods presented consisted of the following (table in millions):

	For the Year Ended			Transition Period
	February 2,	December 31,	December 31,	January 1 to
	2018	2016	2015	February 3,
				2017
Purchases and leases of products and purchases of services	\$ 142	\$ 97	\$ 63	\$ 14
Collaborative technology project costs	—	—	5	—
Dell subsidiary support and administrative costs	123	105	100	13

We also purchase Dell products through Dell's channel partners. Purchases of Dell products through Dell's channel partners were not significant during the periods presented.

From time to time, we and Dell also enter into joint marketing and development arrangements, for which both parties may incur costs.

During the second quarter of fiscal 2018, we acquired Wavefront. Upon closing of the acquisition, Dell was paid \$20 million in cash for its non-controlling ownership interest in Wavefront.

Dell Financial Services ("DFS")

DFS provided financing to certain of our end customers based on the customer's discretion. Upon acceptance of the financing arrangement by both our end customer and DFS, amounts classified as trade accounts receivable are reclassified to due from related parties, net on the consolidated balance sheets. Revenue recognized on transactions financed through DFS was

recorded net of financing fees, which were \$25 million during fiscal 2018 and were not significant during fiscal 2016 and the Transition Period .

EMC Equity Awards Held by VMware Employees

In connection with the Dell Acquisition, vesting was accelerated for all outstanding EMC stock options and restricted stock units and stock options were automatically exercised on the last trading day prior to the effective date of the merger. Our portion of the expense associated with accelerated EMC equity awards held by our employees was \$7 million and was included within stock-based compensation expense on the consolidated statements of income (loss) during fiscal 2016.

Due To/From Related Parties, Net

Amounts due to and from related parties, net as of the periods presented consisted of the following (table in millions):

	February 2, 2018	February 3, 2017
Due (to) related parties	\$ (106)	\$ (85)
Due from related parties	638	178
Due from related parties, net	\$ 532	\$ 93

Amounts included in due from related parties, net, excluding DFS and tax obligations, are generally settled in cash within 60 days of each quarter-end.

Stock Purchase Arrangements with Dell

From time to time, we enter into stock purchase arrangements with Dell. The following table summarizes purchases of our Class A common stock from Dell, pursuant to stock purchase agreements entered into on December 15, 2016 and March 29, 2017 (aggregate purchase price in millions, shares in thousands):

	For the Year Ended	
	February 2, 2018	December 31, 2016
Aggregate purchase price	\$ 725	\$ 375
Class A common shares repurchased ⁽¹⁾	7,572	4,775
Weighted-average price per share	\$ 95.75	\$ 78.53

⁽¹⁾ The aggregate number of shares purchased was determined based upon a volume-weighted average price during a defined period, less an agreed upon discount.

We did not repurchase any shares of our Class A common stock from Dell during the Transition Period .

Notes Payable to Dell

On January 21, 2014, we entered into a note exchange agreement with Dell providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million , which consisted of outstanding principal due on the following dates: \$680 million due May 1, 2018 , \$550 million due May 1, 2020 and \$270 million due December 1, 2022 .

On August 21, 2017, we repaid two of the notes payable to Dell in the aggregate principal amount of \$1,230 million , representing repayment of the note due May 1, 2018 at par value and repayment of the note due May 1, 2020 at a discount. During fiscal 2018, we recognized a gain on extinguishment of debt of \$6 million , which was recorded in other income (expense), net on the consolidated statements of income (loss). The remaining note payable of \$270 million due December 1, 2022 may be prepaid without penalty or premium.

Interest is payable quarterly in arrears, at the annual rate of 1.75% . During fiscal years 2018, 2016 and 2015, interest expense of \$16 million , \$26 million and \$26 million , respectively, was recognized. Interest expense during the Transition Period was not significant.

Pivotal

In April 2016, VMware contributed \$20 million in cash to Pivotal in exchange for additional preferred equity interests in Pivotal. VMware's ownership interest in Pivotal was 20% and 21% as of February 2, 2018 and February 3, 2017 , respectively. This strategic investment is accounted for using the cost method.

Liquidity and Capital Resources

As of the periods presented, we held cash, cash equivalents and short-term investments as follows (table in millions):

	February 2, 2018	February 3, 2017
Cash and cash equivalents	\$ 5,971	\$ 3,220
Short-term investments	5,682	5,173
Total cash, cash equivalents and short-term investments	\$ 11,653	\$ 8,393

We hold a diversified portfolio of money market funds and fixed income securities. Our fixed income securities are denominated in U.S. dollars and primarily consist of highly liquid debt instruments of the U.S. Government and its agencies, municipal obligations, mortgage-backed securities and U.S. and foreign corporate debt securities. We limit the amount of our investments with any single issuer and monitor the diversity of the portfolio and the amount of investments held at any single financial institution, thereby diversifying our credit risk.

As of February 2, 2018, our cash, cash equivalents and short-term investments held outside the U.S. were \$8,609 million. We expect to repatriate a substantial portion of our foreign earnings over time as a result of the enactment of the 2017 Tax Act, to the extent that the foreign earnings are not restricted by local laws or result in significant incremental costs associated with repatriating the foreign earnings. We do not expect the composition of our cash, cash equivalents and short-term investments to change materially as a consequence of any repatriation.

The 2017 Tax Act imposes a mandatory one-time transition tax on accumulated earnings of foreign subsidiaries and eliminates U.S. Federal taxes on foreign subsidiary distributions. As a result of the transition tax, we recorded a provisional estimate for income tax expense of approximately \$800 million that was calculated on a separate tax return basis.

Actual tax payments made to Dell pursuant to the tax sharing agreement may differ materially from our total estimated tax liability calculated on a separate tax return basis. The difference between our estimated liability and the amount paid to Dell is recognized as a component of additional paid-in capital, generally in the period in which the consolidated tax return is filed. The 2017 Tax Act includes a deferral election for an eight-year installment payment method on such transition tax obligations. We currently expect to pay our transition tax obligation over a period of eight years.

During fiscal 2018, our cash, cash equivalents, and short-term investments increased primarily driven by the issuance of long-term debt and cash generated from operations, offset in part by the repayment of two of the notes payable to Dell and acquisitions. We expect that cash generated by operations will be our primary source of liquidity. We also believe that existing cash and cash equivalents, together with any cash generated from operations, will be sufficient to fund our operations for at least the next twelve months. While we believe these cash sources will be sufficient to fund our operations, our overall level of cash needs may be affected by the number and size of acquisitions, investments and stock repurchases, among other things.

Our cash flows summarized for the periods presented were as follows (table in millions):

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Net cash provided by (used in):				
Operating activities	\$ 3,211	\$ 2,381	\$ 1,899	\$ 361
Investing activities	(1,518)	(465)	(336)	7
Financing activities	1,058	(1,619)	(1,141)	62
Net increase in cash and cash equivalents	\$ 2,751	\$ 297	\$ 422	\$ 430

Operating Activities

Cash provided by operating activities increased \$830 million in fiscal 2018 compared to fiscal 2016. Cash provided by operating activities benefited from increased cash collections due to increased sales and improved linearity due to the fiscal year change in fiscal 2018, and a decrease in tax payments as a result of significant tax payments made during fiscal 2016. These positive impacts were partially offset by higher cash outflows related to operating expenses, as well as increased cash payments for employee-related expenses, including salaries, bonuses and commissions, resulting primarily from growth in headcount.

Cash provided by operating activities of \$361 million during the Transition Period primarily reflected cash provided by cash collections, partially offset by cash payments for employee-related expenses.

Cash provided by operating activities increased \$482 million in fiscal 2016 compared to fiscal 2015, driven primarily by increased cash collections due to growth in sales during fiscal 2016. Additionally, cash provided by operating activities in fiscal 2015 reflects payments for legal settlements, including \$76 million for the GSA settlement, and approximately \$185 million of installment payments made to certain key employees of AirWatch, with the final installment payment of \$29 million paid during the first quarter of fiscal 2016. Cash provided by operating activities was partially offset by increases in cash payments for employee-related expenses including salaries, bonuses and commissions due to incremental growth in headcount and salaries. Cash paid for taxes under our tax sharing arrangement with Dell also increased from \$144 million in fiscal 2015 to \$373 million in fiscal 2016.

Investing Activities

Cash used in investing activities is generally attributable to the purchase of available-for-sale securities, business acquisitions and capital expenditures. Cash provided by investing activities is affected by the sales and maturities of our available-for-sale securities.

Cash used in investing activities increased \$1,053 million in fiscal 2018 compared to fiscal 2016, driven primarily by an increase in net cash used in business combinations of \$597 million, property and equipment additions of \$110 million, and net purchases of available-for-sale securities of \$311 million.

Cash used in investing activities increased \$129 million in fiscal 2016 compared to fiscal 2015, driven primarily by increased cash used for net purchases of our available-for-sale securities. In addition, in fiscal 2015, we released \$75 million from escrow related to payments made to certain employees of AirWatch, which was reflected as an inflow within investing activities. These increases were partially offset by a decrease in property and equipment additions of \$180 million.

Financing Activities

Cash provided by financing activities increased \$2,677 million in fiscal 2018 compared to fiscal 2016, driven primarily by the net cash proceeds received from the issuance of long-term debt of \$3,961 million, partially offset by the repayment of two of our outstanding notes payable to Dell of \$1,225 million.

Cash provided by financing activities of \$62 million during the Transition Period was driven by cash proceeds from the issuance of common stock of \$61 million, resulting primarily from our employee stock purchase plan.

Cash used in financing activities increased \$478 million in fiscal 2016 compared to fiscal 2015, primarily as a result of an increase in our repurchase of our common stock.

Long-term Debt

On August 21, 2017, we issued Senior Notes pursuant to a public debt offering in the aggregate amount of \$4,000 million, which consisted of outstanding principal due on the following dates: \$1,250 million due August 21, 2020, \$1,500 million due August 21, 2022 and \$1,250 million due August 21, 2027. The notes bear interest, payable semi-annually in arrears on February 21 and August 21 of each year, at annual rates of 2.30%, 2.95% and 3.90%, respectively. In future periods, the annual interest expense related to the three notes is expected to be approximately \$130 million in the aggregate. We used a portion of the net proceeds from the offering to repay certain notes payable to Dell due May 1, 2018 and May 1, 2020, and intend to use the remaining proceeds to fund additional purchases of up to \$1,000 million of our Class A common stock through August 31, 2018 and for general corporate purposes, including mergers and acquisitions and repaying other indebtedness.

The Senior Notes also include restrictive covenants that, in certain circumstances, limit our ability to create certain liens, to enter into certain sale and leaseback transactions and to consolidate, merge, sell or otherwise dispose of all or substantially all of our assets.

Revolving Credit Facility

On September 12, 2017, we entered into an unsecured credit agreement establishing a revolving credit facility ("Credit Facility") with a syndicate of lenders that provides the Company with a borrowing capacity of up to \$1,000 million, which may be used for general corporate purposes. Commitments under the Credit Facility are available for a period of five years, which may be extended, subject to the satisfaction of certain conditions, by up to two one-year periods. As of February 2, 2018, there were no outstanding borrowings under the Credit Facility. The credit agreement contains certain representations, warranties and covenants.

Notes Payable to Dell

On January 21, 2014, we entered into a note exchange agreement with Dell providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million, which consisted of outstanding principal due on the following dates: \$680 million due May 1, 2018, \$550 million due May 1, 2020 and \$270 million due December 1, 2022.

On August 21, 2017, we repaid two of the notes payable to Dell in the aggregate principal amount of \$1,230 million, representing repayment of the note due May 1, 2018 at par value and repayment of the note due May 1, 2020 at a discount.

Interest is payable quarterly in arrears, at the annual rate of 1.75%. During fiscal 2018, \$19 million was paid for interest related to these notes. During fiscal 2016 and 2015, \$26 million was paid for interest related to these notes.

Stock Repurchase Program

From time to time, we repurchase stock pursuant to authorized stock repurchase programs in open market transactions as permitted by securities laws and other legal requirements. We are not obligated to purchase any shares under our stock repurchase programs. The timing of any repurchases and the actual number of shares repurchased depends on a variety of factors, including our stock price, cash requirements for operations and business combinations, corporate and regulatory requirements and other market and economic conditions. Purchases can be discontinued at any time we believe additional purchases are not warranted. From time to time, we also purchase stock in private transactions, such as with Dell. All shares repurchased under our stock repurchase programs are retired. During August 2017, our board of directors authorized the repurchase of up to \$1,000 million of Class A common stock through August 31, 2018. As of February 2, 2018, the cumulative authorized amount remaining for repurchase under an authorize program was \$876 million. Refer to Note O to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion.

While we have temporarily suspended our stock repurchase program in light of the Schedule 13D/A filed by Dell on February 2, 2018 (the “13D/A”), we continue to see stock repurchases as a key component of our capital allocation program. The 13D/A stated that Dell’s board of directors is evaluating potential business opportunities that include continuing with their existing ownership structure, a public offering of Dell Common Stock, or a business combination with us.

Off-Balance Sheet Arrangements and Contractual Obligations

Guarantees and Indemnification Obligations

We enter into agreements in the ordinary course of business with, among others, customers, distributors, resellers, system vendors and systems integrators. Most of these agreements require us to indemnify the other party against third-party claims alleging that one of our products infringes or misappropriates a patent, copyright, trademark, trade secret or other intellectual property right. Certain of these agreements require us to indemnify the other party against certain claims relating to property damage, personal injury, or the acts or omissions by us and our employees, agents or representatives.

We have agreements with certain vendors, financial institutions, lessors and service providers pursuant to which we have agreed to indemnify the other party for specified matters, such as acts and omissions by us and our employees, agents, or representatives.

We have procurement or license agreements with respect to technology that we have obtained the right to use in our products and agreements. Under some of these agreements, we have agreed to indemnify the supplier for certain claims that may be brought against such party with respect to our acts or omissions relating to the supplied products or technologies.

We have agreed to indemnify our directors and executive officers, to the extent legally permissible, against all liabilities reasonably incurred in connection with any action in which such individual may be involved by reason of such individual being or having been a director or officer. Our by-laws and charter also provide for indemnification of our directors and officers to the extent legally permissible, against all liabilities reasonably incurred in connection with any action in which such individual may be involved by reason of such individual being or having been a director or executive officer. We also indemnify certain employees who provide service with respect to employee benefits plans, including the members of the Administrative Committee of the VMware 401(k) Plan, and employees who serve as directors or officers of our subsidiaries.

In connection with certain acquisitions, we have agreed to indemnify the former directors and officers of the acquired company in accordance with the acquired company’s by-laws and charter in effect immediately prior to the acquisition or in accordance with indemnification or similar agreements entered into by the acquired company and such persons. We typically purchase a “tail” directors and officers insurance policy, which should enable us to recover a portion of any future indemnification obligations related to the former directors and officers of an acquired company.

We are unable to determine the maximum potential amount under these indemnification agreements due to our limited history with prior indemnification claims and the unique facts and circumstances involved in each particular situation. Historically, costs related to these indemnification provisions have not been significant.

Contractual Obligations

We have various contractual obligations impacting our liquidity. The following represents our contractual obligations as of February 2, 2018 (table in millions):

	Payments Due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Senior Notes ⁽¹⁾	\$ 4,796	\$ 122	\$ 1,494	\$ 1,686	\$ 1,494
Note payable to Dell ⁽²⁾	293	5	9	279	—
Operating leases ⁽³⁾	860	87	141	87	545
Purchase obligations	73	45	26	2	—
Other contractual commitments ⁽⁴⁾	24	4	8	5	7
Sub-Total	6,046	263	1,678	2,059	2,046
Uncertain tax positions ⁽⁵⁾	302				
Total	<u>\$ 6,348</u>				

- (1) Consists of principal and interest payments on the Senior Notes. Refer to “Liquidity and Capital Resources” for a discussion of the public debt offering we issued on August 21, 2017 in the aggregate amount of \$4,000 million .
- (2) Consists of principal and interest payments on the outstanding note payable to Dell. Refer to “Liquidity and Capital Resources” for a discussion of the \$270 million note payable we entered into with Dell per the note exchange agreement from January 21, 2014.
- (3) Our operating leases are primarily for facility space and land, and amounts in the table above exclude expected sublease income.
- (4) Consisting of various contractual agreements, which include commitments on the lease for our Washington data center facility and asset retirement obligations.
- (5) As of February 2, 2018 , we had \$302 million of gross uncertain tax benefits, excluding interest and penalties. The timing of future payments relating to these obligations is highly uncertain. Based on the timing and outcome of examinations of our subsidiaries, the result of the expiration of statutes of limitations for specific jurisdictions or the timing and result of ruling requests from taxing authorities, it is reasonably possible that within the next 12 months total net unrecognized tax benefits could be potentially reduced by approximately \$23 million .

Critical Accounting Policies and Estimates

In preparing our consolidated financial statements in accordance with accounting principles generally accepted in the United States of America (“GAAP”), we are required to make estimates, assumptions and judgments that affect the amounts reported on our financial statements and the accompanying disclosures. Estimates and assumptions about future events and their effects cannot be determined with certainty and therefore require the exercise of judgment. We base our estimates, assumptions and judgments on historical experience and various other factors that we believe to be reasonable under the circumstances. These estimates may change, as new events occur and additional information is obtained, and are recognized in the consolidated financial statements as soon as they become known. Actual results could differ from those estimates and any such differences may be material to our financial statements. We believe that the critical accounting policies and estimates set forth below involve a higher degree of judgment and complexity in their application than our other significant accounting policies. Our senior management has reviewed our critical accounting policies and related disclosures with the Audit Committee of the Board of Directors. Historically, our assumptions, judgments and estimates relative to our critical accounting policies have not differed materially from actual results. Refer to Note A to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for information on significant accounting policies and estimates used in the preparation of the consolidated financial statements.

Revenue Recognition

We derive revenue primarily from licensing our software under perpetual licenses and based on consumption, related software maintenance and support, training, consulting services and hosted services. Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or service has been provided, the sales price is fixed or determinable, and collectibility is probable. Determining whether and when some of these criteria have been satisfied often involves assumptions and judgments that can have a significant impact on the timing and amount of revenue recognized.

We enter into multiple-element revenue arrangements in which a customer may purchase a combination of software, maintenance and support, training, consulting services and hosted services. If a product or service included in a software-

related multiple-element arrangement has not been delivered, and is not considered essential to the functionality of the delivered products or services, we must determine the fair value of each undelivered product or service using VSOE. Absent VSOE, revenue is deferred until VSOE of fair value exists for each of the undelivered products or services, or until all elements of the arrangement have been delivered. However, if the only undelivered element without VSOE is maintenance and support, the entire arrangement fee is recognized ratably over the performance period. Changes in assumptions or judgments or changes to the elements in a software arrangement could cause a material increase or decrease in the amount of revenue that we report in a particular period.

VSOE of fair value for an undelivered element is generally based on historical stand-alone sales to third parties. In limited instances, for an offering that is not yet sold, VSOE is the price established by management, including contractual renewal rate, if it is probable that the price will not change when introduced to the marketplace. In determining VSOE of fair value, we require that the selling prices for a product or service fall within a reasonable pricing range. For multiple-element arrangements that contain software and non-software elements, we allocate revenue to software or software-related elements as a group and any non-software elements separately based on relative selling prices using the selling price hierarchy. The relative selling price for each deliverable is determined using VSOE, if it exists, or third-party evidence (“TPE”) of selling price. TPE of selling price is based on evaluation of prices charged for competitor products or services sold to similarly situated customers. As our offerings contain significant proprietary technology and provide different features and functionality, comparable prices of similar products typically cannot be obtained and relied upon. If neither VSOE nor TPE of selling price exist for a deliverable, best estimate of selling price (“BESP”) is used for that deliverable. We use BESP in allocation of arrangement consideration. We determine BESP by considering our overall pricing objectives and practices across different sales channels.

A specified upgrade obligation is created in the event we publicly announce new specific features, functionalities or entitlements to software upgrades or license products that have not been made available. We generally do not have VSOE of fair value for specified upgrades or license products. Accordingly, revenue recognition is deferred for multiple-element arrangements that entitle a customer to specified upgrades or new license products until the product obligations have been fulfilled.

Professional services include design, implementation and training. Professional services are not considered essential to the functionality of our products because services do not alter the product capabilities and may be performed by customers or other vendors. Revenue from professional services engagements performed for a fixed fee, for which we are able to make reasonably dependable estimates of progress toward completion, is recognized on a proportional performance basis assuming all other revenue recognition criteria are met. Revenue for professional services engagements billed on a time and materials basis is recognized as the hours are incurred.

Rebate Reserves

We offer rebates to certain channel partners, which are recognized as a reduction to revenue or unearned revenue. Rebates based on actual partner sales are recognized as a reduction to revenue as the underlying revenue is recognized. Rebates earned based upon partner achievement of cumulative level of sales are recognized as a reduction of revenue proportionally for each sale that is required to achieve the target.

The estimated reserves for channel rebates and sales incentives are based on channel partners’ actual performance against the terms and conditions of the programs, historical trends and the value of the rebates. The accuracy of these reserves for these rebates and sales incentives depends on our ability to estimate these items and could have a significant impact on the timing and amount of revenue we report.

Accounting for Income Taxes

We are included in Dell’s consolidated tax group for U.S. federal income tax purposes, and will continue to be included in Dell’s consolidated group for periods in which Dell beneficially owns at least 80% of the total voting power and value of our combined outstanding Class A and Class B common stock as calculated for U.S. federal income tax purposes. The percentage of voting power and value calculated for U.S. federal income tax purposes may differ from the percentage of outstanding shares beneficially owned by Dell due to the greater voting power of our Class B common stock as compared to our Class A common stock and other factors. Each member of a consolidated group during any part of a consolidated return year is jointly and severally liable for tax on the consolidated return of such year and for any subsequently determined deficiency thereon.

Our income tax expense and the related income tax balance sheet accounts, including estimated effect resulting from the 2017 Tax Act, is calculated primarily as though we were a separate taxpayer. However, under certain circumstances, transactions between us and Dell are assessed using consolidated tax return rules. The difference between the income taxes payable that is calculated on a separate tax return basis and the amount paid to Dell pursuant to our tax sharing agreement with Dell is presented as a component of additional paid-in capital, generally in the period in which the consolidated return is filed. Our assumptions, judgments and estimates used to calculate our income tax expense considers current tax laws, our

interpretation of current tax laws and possible outcomes of current and future audits conducted by foreign and domestic tax authorities.

We establish reserves for income taxes to address potential exposures involving tax positions that could be challenged by federal, state and foreign tax authorities, which may result in proposed assessments. In the ordinary course of our global business there are many intercompany transactions, including the transfer of intellectual property, where the ultimate tax determination could be challenged by the tax authorities. Our assumptions, estimates, and judgments used to determine the reserve relating to these positions considers current tax laws, interpretation of current tax laws and possible outcomes of current and future examinations conducted by tax authorities. As part of the Dell consolidated group, and separately, we are subject to the periodic examination of our income tax returns by the Internal Revenue Service and other domestic and foreign tax authorities. We regularly assess the likelihood of outcomes resulting from these examinations to determine the adequacy of our reserves and any potential adjustments that may result from the current and future examinations. We believe such estimates to be reasonable; however, the final determination from examinations and changes in tax laws could significantly impact the amounts provided for income taxes in the consolidated financial statements.

The 2017 Tax Act introduces significant changes to U.S. income tax law including a mandatory one-time transition tax on accumulated earnings of foreign subsidiaries and a reduction of the U.S. statutory corporate income tax rate from 35% to 21%, effective January 1, 2018. During December 2017, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (“SAB 118”), which allows recognition of provisional tax amounts during a measurement period not to extend beyond one year of the enactment date. Due to the timing of the enactment and the complexity involved in applying the provisions of the 2017 Tax Act, we have made reasonable estimates for these effects and recorded provisional amounts on our consolidated financial statements for fiscal 2018. We have not yet finalized our calculation of the total foreign earnings and profits for our respective foreign subsidiaries. In addition, we do not have sufficient information available, prepared or analyzed to develop a reasonable estimate of the deferred tax liability related to remaining outside basis differences, withholding taxes, certain state taxes, and other items; as such, we have not estimated these impacts as permitted by SAB 118.

Provisional taxes relating to the effect of the tax law changes, including the estimated transition tax and the remeasurement of U.S. deferred tax assets and liabilities, among others, were recognized during fiscal 2018. As we complete our analysis of the 2017 Tax Act, collect and prepare necessary data, and interpret any additional guidance issued by the U.S. Treasury Department, the IRS, and other standard-setting bodies and relevant authorities, we may make adjustments to provisional amounts that we have recorded that may materially impact our provision for income taxes in the period in which the adjustments are made. We expect to complete our analysis within the measurement period permitted under SAB 118.

The Global Intangible Low-Taxed Income (“GILTI”) provisions of the 2017 Tax Act require us to include in our U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary’s tangible assets. GAAP allows us to choose between an accounting policy which treats the U.S. tax under GILTI provisions as either a current expense, as incurred, or as a component of the Company’s measurement of deferred taxes. Due to the timing of the enactment and the complexity involved in applying the GILTI provisions, we do not have sufficient information available, prepared or analyzed to develop a reasonable estimate or establish an accounting policy for GILTI; therefore, we have not recorded any tax impacts associated with GILTI on our consolidated financial statements for fiscal 2018.

We are subject to tax in the U.S. and in multiple foreign tax jurisdictions. Our U.S. liquidity needs are currently satisfied using cash flows generated from our U.S. operations, borrowings, or both. We also utilize a variety of tax planning strategies in an effort to ensure that our worldwide cash is available in locations in which it is needed. Prior to fiscal 2018, we did not recognize a deferred tax liability related to undistributed foreign earnings of our subsidiaries because such earnings were considered to be indefinitely reinvested in our foreign operations, or were remitted substantially free of U.S. tax. Under the 2017 Tax Act, all foreign earnings are subject to U.S. taxation. As a result, we expect to repatriate a substantial portion of our foreign earnings over time, to the extent that the foreign earnings are not restricted by local laws or result in significant incremental costs associated with repatriating the foreign earnings. The Company has recorded a provisional estimate for the transition tax on these earnings.

Our deferred tax assets reflect our estimates of the amount and category of future taxable income, such as income from operations and capital gains, and also take into account valuation allowances that consider other key factors that might restrict our ability to realize the deferred tax assets. In addition, our deferred tax assets reflect a provisional estimate relating to the reduction of the U.S. statutory corporate income tax rate under the 2017 Tax Act. Actual operating results and the underlying amount and category of income in future years could render our current assumptions, judgments and estimates of recoverable net deferred taxes inaccurate.

New Accounting Pronouncements

Topic 606, Revenue from Contracts with Customers

During May 2014, the FASB issued Accounting Standards Update (“ASU”) No. 2014-09, Revenue from Contracts with Customers (Topic 606). In 2016, the FASB issued ASU 2016-08, ASU 2016-10 and ASU 2016-12, which provide interpretive clarifications on the guidance in Topic 606 (collectively, “Topic 606”). The updated revenue standard replaces all existing revenue recognition guidance under GAAP and establishes common principles for recognizing revenue for all industries. It also provides guidance on the accounting for costs to fulfill or obtain a customer contract. The core principle underlying the updated standard is the recognition of revenue based on consideration expected to be entitled from the transfer of goods or services to a customer. The updated standard is effective for interim and annual periods beginning after December 15, 2017 and permits the use of either the full retrospective or cumulative effect transition method.

We plan to adopt Topic 606 using the full retrospective transition method when it becomes effective for us in the first quarter of fiscal 2019. Currently, we defer license revenue related to the sale of perpetual licenses in the event certain revenue recognition criteria are not met. This would include transactions that offer undelivered future products including emerging products that are offered as part of product promotions, where VSOE of fair value has not been established. However, under Topic 606, we would generally expect that substantially all license revenue related to the sale of perpetual licenses will be recognized upon delivery. In addition, under Topic 606, revenue from on-premise license sales to original equipment manufacturers (“OEMs”) or rental of on-premise licenses to our VCPP partners will be recognized when the sale or usage occurs. As a result, for periods where reporting of sales or consumption by OEMs or VCPP partners, respectively, are not available, revenue will be recognized based on estimated sales or usage.

The net impact of adopting Topic 606 to license and total revenue is not expected to be material for fiscal 2018. Deferred license revenue as of February 2, 2018 is expected to decrease by approximately \$350 million, primarily due to the acceleration of revenue recognition for on-premise license sales that were deferred under previous accounting guidance, and due to prepayments on contracts with various cancellation rights. In limited situations, our contracts include termination clauses allowing customers to terminate without penalty. Under Topic 606, prepayments received from customers for contracts, or a portion of a contract, subject to termination without penalty will be recorded as a customer deposit in accrued expenses and other on the consolidated balance sheets. Under previous guidance, prepayments received from customers were recorded in unearned revenue on the consolidated balance sheets.

Topic 606 is also expected to impact the timing and recognition of costs to obtain contracts with customers, such as commissions. Incremental costs to obtain contracts with customers are deferred and recognized over the expected period of benefit. As a result, additional commission costs will be deferred and amortized over a longer duration. Other assets on the consolidated balance sheets are expected to increase by approximately \$600 million as of February 2, 2018 due to the treatment of commission costs under Topic 606. In addition, sales and marketing expense under Topic 606 is expected to decrease by approximately \$90 million for fiscal 2018, primarily due to the treatment of commission costs.

We are continuing to evaluate the effect that Topic 606 will have on our consolidated financial statements, including the impact on income tax expense and related balance sheet accounts. In preparation for the adoption of the updated standard, we have implemented a new revenue recognition software to enable us to perform the accounting assessment related to the standard and are in the process of implementing internal controls. The preliminary adjustments under Topic 606 may differ from the final adjusted consolidated financial statements for fiscal 2018.

ASU No. 2016-02, Leases

During February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which requires a lessee to recognize a lease liability for the obligation to make lease payments and a right-of-use asset for the right to use the underlying asset for the lease term. The updated standard also requires additional disclosure regarding leasing arrangements. It is effective for interim and annual periods beginning after December 15, 2018 and requires a modified retrospective adoption, with early adoption permitted. We are currently evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures, and we expect that most of our lease commitments will be subject to the updated standard and recognized as lease liabilities and right-of-use assets upon adoption.

ASU No. 2016-16, Income Taxes

During October 2016, the FASB issued ASU No. 2016-16, Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory (Topic 740), which requires entities to recognize at the transaction date the income tax consequences of intra-entity asset transfers. Previous guidance required the tax effects from intra-entity asset transfers to be deferred until that asset is sold to a third party or recovered through use. The updated standard is effective for annual and interim periods beginning after December 15, 2017 and requires a modified retrospective transition method. Historically, we have transferred intellectual property between our legal entities. While we are continuing to assess the potential effects, transfers of intellectual property

between our legal entities occurring after the adoption of this updated standard could have a material impact on our consolidated statements of income (loss) in the period that the transfer occurs.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Exchange Risk

We operate in foreign countries, which expose us to market risk associated with foreign currency exchange rate fluctuations between the U.S. dollar and various foreign currencies, the most significant of which is the euro.

Although approximately 70% of our sales are denominated in the U.S. dollar, we also invoice and collect in the euro, the British pound, the Japanese yen, the Australian dollar and the Chinese renminbi in their respective regions. The U.S. dollar is the functional currency for all of VMware's legal entities. At the time a non-U.S. dollar transaction is recorded, the value of the transaction is converted into U.S. dollars at the exchange rate in effect for the month in which each order is booked. As a result, the amount of license and total revenue derived from these transactions will be impacted by foreign currency exchange fluctuations.

Additionally, a portion of our operating expenses, primarily the cost of personnel to deliver technical support on our products and professional services, sales and sales support and research and development, are denominated in foreign currencies, primarily those currencies in which we also invoice and collect. As exchange rates vary, operating results may differ materially from expectations.

To manage the risk associated with fluctuations in foreign currency exchange rates, we utilize derivative financial instruments, principally foreign currency forward contracts ("forward contracts"), as described below.

Cash Flow Hedging Activities. To mitigate our exposure to foreign currency fluctuations resulting from certain operating expenses denominated in certain foreign currencies, we enter into forward contracts. We enter into forward contracts annually, which have maturities of twelve months or less. As of February 2, 2018 and February 3, 2017, we had outstanding forward contracts with a total notional value of \$318 million and \$250 million, respectively. The fair value of these forward contracts was not significant as of February 2, 2018 and February 3, 2017.

Forward Contracts Not Designated as Hedges. We enter into forward contracts to offset the foreign currency risk associated with net outstanding monetary asset and liability positions. Our forward contracts are traded on a monthly basis and typically have a contractual term of one month. As of February 2, 2018 and February 3, 2017, we had outstanding forward contracts with a total notional value of \$1,020 million and \$834 million, respectively. The fair value of these forward contracts was not significant as of February 2, 2018 and February 3, 2017.

Sensitivity Analysis. There can be no assurance that our hedging activities will adequately protect us against the risks associated with foreign currency fluctuations. A hypothetical adverse foreign currency exchange rate movement of 10% would have resulted in a potential loss of \$131 million in fair value of our forward contracts as of February 2, 2018. This sensitivity analysis disregards any offsetting gain that may be associated with the underlying foreign-currency denominated assets and liabilities that we hedge.

This analysis also assumes a parallel adverse shift of all foreign currency exchange rates against the U.S. dollar; however, foreign currency exchange rates do not always move in such a manner and actual results may differ materially. We do not, and do not intend to use derivative financial instruments for trading or speculative purposes. Refer to Note I to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

Interest Rate Risk

Fixed Income Securities

Our fixed income investment portfolio is denominated in U.S. dollars and consists of various sectors at different maturities. Our primary objective for holding fixed income securities is to achieve an appropriate investment return consistent with preserving principal and managing risk.

Sensitivity Analysis. At any time, a sharp rise in interest rates or credit spreads could have a material adverse impact on the fair value of our fixed income investment portfolio. Hypothetical increases in interest rates of 50 basis points and 100 basis points would have decreased the fair value of our fixed income investment portfolio as of February 2, 2018 by \$40 million and \$79 million, respectively. Hypothetical decreases in interest rates of 50 basis points and 100 basis points would have increased the fair value of our fixed income investment portfolio as of February 2, 2018 by \$40 million and \$79 million, respectively.

This sensitivity analysis assumes a parallel shift of all interest rates; however, interest rates do not always move in such a manner and actual results may differ significantly. We monitor our interest rate and credit risk, including our credit exposures to specific rating categories and to individual issuers. These instruments are not leveraged and we do not intend to use them for

speculative purposes. Refer to Notes F and H to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

Equity Price Risk

Strategic Investments

Our strategic investments include privately held companies which are considered to be in the start-up or development stages and are inherently risky. The technologies or products these companies have under development are typically in the early stages and may never materialize, which could result in a loss of a substantial part of our initial investment in these companies. The carrying values of our strategic investments were accounted for under the cost method. We evaluate the strategic investments in our portfolio to assess whether they are other-than-temporarily impaired. The evaluation is based on information provided by these companies, which is not subject to the same disclosure regulations as U.S. publicly traded companies, and as such, the basis for these evaluations is subject to the timing and accuracy of the data provided. The carrying value of VMware's strategic investments was \$146 million and \$139 million as of February 2, 2018 and February 3, 2017, respectively.

Marketable Equity Securities

Our marketable equity investment in a publicly traded company is subject to market price risk. As of February 2, 2018 and February 3, 2017, our total investment was \$33 million and \$22 million, respectively. At any time, a fluctuation in the price of each equity security could have an adverse impact on the fair value of our investment. A hypothetical adverse price change of 10% would not materially decrease the fair value of our marketable equity security as of February 2, 2018. Refer to Notes F and H to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTAL DATA

VMware, Inc.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS AND SCHEDULE

Report of Independent Registered Public Accounting Firm	58
Consolidated Statements of Income (Loss) for the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period from January 1, 2017 to February 3, 2017	59
Consolidated Statements of Comprehensive Income (Loss) for the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period from January 1, 2017 to February 3, 2017	60
Consolidated Balance Sheets at February 2, 2018 and February 3, 2017	61
Consolidated Statements of Cash Flows for the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period from January 1, 2017 to February 3, 2017	62
Consolidated Statements of Stockholders' Equity for the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period from January 1, 2017 to February 3, 2017	63
Notes to Consolidated Financial Statements	64
Schedule:	
Schedule II—Valuation and Qualifying Accounts for the years ended February 2, 2018, December 31, 2016, December 31, 2015 and the Transition Period from January 1, 2017 to February 3, 2017	107

Note: All other financial statement schedules are omitted because they are not applicable or the required information is included on the consolidated financial statements or notes thereto.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of VMware, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of VMware, Inc. and its subsidiaries as of February 2, 2018 and February 3, 2017, and the related consolidated statements of income (loss), comprehensive income (loss), stockholders' equity and cash flows for the year ended February 2, 2018, the period from January 1, 2017 to February 3, 2017, and for each of the two years in the period ended December 31, 2016, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of February 2, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of February 2, 2018 and February 3, 2017, and the results of their operations and their cash flows for the year ended February 2, 2018, the period from January 1, 2017 to February 3, 2017, and for each of the two years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of February 2, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the 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/ PricewaterhouseCoopers LLP

San Jose, California
March 29, 2018

We have served as the Company's auditor since 2007.

VMware, Inc.
CONSOLIDATED STATEMENTS OF INCOME (LOSS)
(amounts in millions, except per share amounts, and shares in thousands)

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Revenue:				
License ⁽¹⁾	\$ 3,195	\$ 2,794	\$ 2,720	\$ 125
Services ⁽²⁾	4,727	4,299	3,927	371
GSA settlement	—	—	(76)	—
Total revenue	7,922	7,093	6,571	496
Operating expenses ⁽³⁾ :				
Cost of license revenue	157	159	186	13
Cost of services revenue	984	894	832	80
Research and development	1,755	1,503	1,300	150
Sales and marketing	2,593	2,357	2,267	231
General and administrative	654	689	766	63
Realignment and loss on disposition	90	52	23	—
Operating income (loss)	1,689	1,439	1,197	(41)
Investment income	120	77	49	8
Interest expense	(74)	(26)	(26)	(2)
Other income (expense), net	66	(17)	(7)	1
Income (loss) before income tax	1,801	1,473	1,213	(34)
Income tax provision (benefit)	1,231	287	216	(26)
Net income (loss)	\$ 570	\$ 1,186	\$ 997	\$ (8)
Net income (loss) per weighted-average share, basic for Classes A and B	\$ 1.40	\$ 2.82	\$ 2.35	\$ (0.02)
Net income (loss) per weighted-average share, diluted for Classes A and B	\$ 1.38	\$ 2.78	\$ 2.34	\$ (0.02)
Weighted-average shares, basic for Classes A and B	406,738	420,520	424,003	408,625
Weighted-average shares, diluted for Classes A and B	413,368	423,994	426,547	408,625

⁽¹⁾ Includes related party license revenue of \$722 million for the year ended February 2, 2018 (refer to Note B).

⁽²⁾ Includes related party services revenue of \$645 million for the year ended February 2, 2018 (refer to Note B).

⁽³⁾ Includes stock-based compensation as follows:

Cost of license revenue	\$ 2	\$ 2	\$ 2	\$ —
Cost of services revenue	50	52	44	5
Research and development	355	305	226	31
Sales and marketing	197	195	168	19
General and administrative	79	82	64	7

The accompanying notes are an integral part of the consolidated financial statements.

VMware, Inc.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in millions)

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Net income (loss)	\$ 570	\$ 1,186	\$ 997	\$ (8)
Other comprehensive income (loss):				
Changes in market value of available-for-sale securities:				
Unrealized gains (losses) , net of tax provision (benefit) of (\$5), (\$4), (\$4) and \$1	(12)	(6)	(7)	2
Reclassification of (gains) losses realized during the period, net of tax benefit of \$2, \$3, \$— and \$—	3	5	—	—
Net change in market value of available-for-sale securities	(9)	(1)	(7)	2
Changes in market value of effective foreign currency forward contracts:				
Unrealized gains (losses) , net of tax provision of \$— for all periods	1	1	—	3
Reclassification of (gains) losses realized during the period, net of tax provision of \$— for all periods	(3)	(1)	—	—
Net change in market value of effective foreign currency forward contracts	(2)	—	—	3
Total other comprehensive income (loss)	(11)	(1)	(7)	5
Total comprehensive income (loss), net of taxes	\$ 559	\$ 1,185	\$ 990	\$ (3)

The accompanying notes are an integral part of the consolidated financial statements.

VMware, Inc.
CONSOLIDATED BALANCE SHEETS
(amounts in millions, except per share amounts, and shares in thousands)

	February 2, 2018	February 3, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 5,971	\$ 3,220
Short-term investments	5,682	5,173
Accounts receivable, net of allowance for doubtful accounts of \$2 and \$2	1,312	1,192
Due from related parties, net	532	93
Other current assets	237	173
Total current assets	13,734	9,851
Property and equipment, net	1,074	1,042
Other assets	323	249
Deferred tax assets	346	716
Intangible assets, net	548	507
Goodwill	4,597	4,032
Total assets	\$ 20,622	\$ 16,397
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 15	\$ 53
Accrued expenses and other	1,241	887
Unearned revenue	3,777	3,349
Total current liabilities	5,033	4,289
Notes payable to Dell	270	1,500
Long-term debt	3,964	—
Unearned revenue	2,473	1,991
Income tax payable	954	281
Other liabilities	152	120
Total liabilities	12,846	8,181
Contingencies (refer to Note K)		
Stockholders' equity:		
Class A common stock, par value \$.01; authorized 2,500,000 shares; issued and outstanding 103,776 and 110,060 shares	1	1
Class B convertible common stock, par value \$.01; authorized 1,000,000 shares; issued and outstanding 300,000 shares	3	3
Additional paid-in capital	844	1,843
Accumulated other comprehensive loss	(15)	(4)
Retained earnings	6,943	6,373
Total stockholders' equity	7,776	8,216
Total liabilities and stockholders' equity	\$ 20,622	\$ 16,397

The accompanying notes are an integral part of the consolidated financial statements.

VMware, Inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	For the Year Ended			Transition Period
	February 2,	December 31,	December 31,	January 1 to
	2018	2016	2015	February 3,
				2017
Operating activities:				
Net income (loss)	\$ 570	\$ 1,186	\$ 997	\$ (8)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:				
Depreciation and amortization	336	345	335	29
Stock-based compensation	683	636	504	62
Excess tax benefits from stock-based compensation	—	(15)	(28)	(5)
Deferred income taxes, net	386	(8)	(31)	(254)
Loss on disposition	82	—	—	—
(Gain) loss on disposition of assets, revaluation and impairment	(45)	30	5	—
Gain on extinguishment of debt	(6)	—	—	—
(Gain) loss on Dell stock purchase	2	(8)	—	(1)
Other	3	(2)	(1)	—
Changes in assets and liabilities, net of acquisitions:				
Accounts receivable	(113)	(224)	(114)	664
Other assets	(136)	(215)	32	190
Due to/from related parties, net	(440)	(54)	(21)	39
Accounts payable	(35)	(9)	(35)	(68)
Accrued expenses and other liabilities	324	187	1	(41)
Income taxes payable	660	(15)	13	38
Unearned revenue	940	547	242	(284)
Net cash provided by operating activities	3,211	2,381	1,899	361
Investing activities:				
Additions to property and equipment	(263)	(153)	(333)	(18)
Purchases of available-for-sale securities	(4,269)	(3,725)	(3,323)	(38)
Sales of available-for-sale securities	2,195	2,227	2,193	43
Maturities of available-for-sale securities	1,573	1,307	1,100	20
Purchases of strategic investments	(37)	(49)	(14)	—
Proceeds from disposition of assets	13	4	4	—
Business combinations, net of cash acquired	(671)	(74)	(38)	—
Net cash paid on disposition of a business	(53)	—	—	—
Decrease (increase) in restricted cash	(6)	(2)	75	—
Net cash provided by (used in) investing activities	(1,518)	(465)	(336)	7
Financing activities:				
Proceeds from issuance of common stock	122	109	126	61
Net proceeds from issuance of long-term debt	3,961	—	—	—
Repayment of notes payable to Dell	(1,225)	—	—	—
Proceeds from (payment to acquire) non-controlling interests	—	(4)	4	—
Repurchase of common stock	(1,449)	(1,575)	(1,125)	—
Excess tax benefits from stock-based compensation	—	15	28	5
Shares repurchased for tax withholdings on vesting of restricted stock	(351)	(164)	(174)	(4)
Net cash provided by (used in) financing activities	1,058	(1,619)	(1,141)	62
Net increase in cash and cash equivalents	2,751	297	422	430
Cash and cash equivalents at beginning of the period	3,220	2,493	2,071	2,790
Cash and cash equivalents at end of the period	\$ 5,971	\$ 2,790	\$ 2,493	\$ 3,220
Supplemental disclosures of cash flow information:				
Cash paid for interest	\$ 21	\$ 29	\$ 28	\$ —

Cash paid for taxes, net	177	467	231	3
--------------------------	-----	-----	-----	---

Non-cash items:

Changes in capital additions, accrued but not paid	\$	10	\$	(7)	\$	(49)	\$	(6)
--	----	----	----	-----	----	------	----	-----

The accompanying notes are an integral part of the consolidated financial statements.

VMware, Inc.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions)

	Class A Common Stock		Class B Convertible Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interests	Stockholders' Equity
	Shares	Par Value	Shares	Par Value					
Balance, January 1, 2015	129	\$ 1	300	\$ 3	\$ 3,380	\$ 4,198	\$ (1)	\$ 5	\$ 7,586
Proceeds from issuance of common stock	4	—	—	—	126	—	—	—	126
Repurchase and retirement of common stock	(13)	—	—	—	(1,125)	—	—	—	(1,125)
Issuance of restricted stock, net of cancellations	5	—	—	—	—	—	—	—	—
Shares withheld for tax withholdings on vesting of restricted stock	(3)	—	—	—	(173)	—	—	—	(173)
Stock-based compensation	—	—	—	—	504	—	—	—	504
Excess tax benefits from stock-based compensation	—	—	—	—	3	—	—	—	3
Credit from tax sharing arrangement	—	—	—	—	13	—	—	—	13
Total other comprehensive income (loss)	—	—	—	—	—	—	(7)	—	(7)
Activities with non-controlling interests	—	—	—	—	—	—	—	(1)	(1)
Net income	—	—	—	—	—	997	—	—	997
Balance, December 31, 2015	122	1	300	3	2,728	5,195	(8)	4	7,923
Proceeds from issuance of common stock	3	—	—	—	109	—	—	—	109
Repurchase and retirement of common stock	(21)	—	—	—	(1,575)	—	—	—	(1,575)
Issuance of restricted stock, net of cancellations	7	—	—	—	—	—	—	—	—
Shares withheld for tax withholdings on vesting of restricted stock	(3)	—	—	—	(167)	—	—	—	(167)
Stock-based compensation	—	—	—	—	636	—	—	—	636
Tax shortfall from stock-based compensation	—	—	—	—	(24)	—	—	—	(24)
Credit from tax sharing arrangement	—	—	—	—	15	—	—	—	15
Total other comprehensive income (loss)	—	—	—	—	—	—	(1)	—	(1)
Activities with non-controlling interests	—	—	—	—	(1)	—	—	(4)	(5)
Net income	—	—	—	—	—	1,186	—	—	1,186
Balance, December 31, 2016	108	1	300	3	1,721	6,381	(9)	—	8,097
Proceeds from issuance of common stock	2	—	—	—	61	—	—	—	61
Shares withheld for tax withholdings on vesting of restricted stock	—	—	—	—	(7)	—	—	—	(7)
Stock-based compensation	—	—	—	—	62	—	—	—	62
Excess tax benefits from stock-based compensation	—	—	—	—	2	—	—	—	2
Credit from tax sharing arrangement	—	—	—	—	4	—	—	—	4
Total other comprehensive income (loss)	—	—	—	—	—	—	5	—	5
Net loss	—	—	—	—	—	(8)	—	—	(8)
Balance, February 3, 2017	110	1	300	3	1,843	6,373	(4)	—	8,216
Proceeds from issuance of common stock	2	—	—	—	122	—	—	—	122
Issuance of stock-based awards in acquisition	—	—	—	—	4	—	—	—	4
Repurchase and retirement of common stock	(14)	—	—	—	(1,456)	—	—	—	(1,456)
Issuance of restricted stock, net of cancellations	9	—	—	—	—	—	—	—	—
Shares withheld for tax withholdings on vesting of restricted stock	(3)	—	—	—	(348)	—	—	—	(348)

Stock-based compensation	—	—	—	—	683	—	—	—	683
Credit from tax sharing arrangement	—	—	—	—	(4)	—	—	—	(4)
Total other comprehensive income (loss)	—	—	—	—	—	—	(11)	—	(11)
Net income	—	—	—	—	—	570	—	—	570
Balance, February 2, 2018	104	\$ 1	300	\$ 3	\$ 844	\$ 6,943	\$ (15)	\$ —	\$ 7,776

The accompanying notes are an integral part of the consolidated financial statements.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

A. Overview and Basis of Presentation***Company and Background***

VMware, Inc. (“VMware” or the “Company”) pioneered the development and application of virtualization technologies with x86 server-based computing, separating application software from the underlying hardware. Information technology (“IT”) driven innovation is disrupting markets and industries. Technologies emerge faster than organizations can absorb, creating increasingly complex environments. To take on this challenge, businesses need a flexible and secure digital foundation. VMware provides compute, cloud, mobility, networking and security infrastructure software to businesses that provides a flexible digital foundation for the applications that empower businesses to serve their customers globally.

Basis of Presentation

The consolidated financial statements and accompanying notes have been prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”) and pursuant to the rules and regulations of the Securities and Exchange Commission (the “SEC”) for annual financial reporting.

VMware was incorporated as a Delaware corporation in 1998, was acquired by EMC Corporation (“EMC”) in 2004 and conducted its initial public offering of VMware’s Class A common stock in August 2007. Effective September 7, 2016, Dell Technologies Inc. (“Dell”) (formerly Denali Holding Inc.) acquired EMC, including EMC’s majority control of VMware (the “Dell Acquisition”). As a result of the Dell Acquisition, EMC became a wholly-owned subsidiary of Dell and VMware became an indirectly held, majority-owned subsidiary of Dell. As of February 2, 2018, Dell controlled 81.9% of VMware’s outstanding common stock and 97.6% of the combined voting power of VMware’s outstanding common stock, including 31 million shares of VMware’s Class A common stock and all of VMware’s Class B common stock.

As VMware is a majority-owned and controlled subsidiary of Dell, its results of operations and financial position are consolidated with Dell’s financial statements. Transactions prior to the effective date of Dell’s Acquisition represent transactions only with EMC and its consolidated subsidiaries.

Effective January 1, 2017, VMware’s fiscal year changed from a fiscal year ending on December 31 of each calendar year to a fiscal year consisting of a 52- or 53-week period ending on the Friday nearest to January 31 of each year. The period that began on January 1, 2017 and ended on February 3, 2017 is reflected as a transition period (the “Transition Period”). VMware’s first full fiscal year 2018 under the revised fiscal calendar is a 52-week year that began on February 4, 2017 and ended on February 2, 2018. The Company has included its audited consolidated financial statements for the Transition Period in this Annual Report on Form 10-K. Prior-period financial statements have not been recast.

Management believes the assumptions underlying the consolidated financial statements are reasonable. However, the amounts recorded for VMware’s intercompany transactions with Dell and its consolidated subsidiaries may not be considered arm’s length with an unrelated third party. Therefore, the financial statements included herein may not necessarily reflect the results of operations, financial position and cash flows had VMware engaged in such transactions with an unrelated third party during all periods presented. Accordingly, VMware’s historical financial information is not necessarily indicative of what the Company’s results of operations, financial position and cash flows will be in the future if and when VMware contracts at arm’s length with unrelated third parties for products and services the Company receives from and provides to Dell.

Principles of Consolidation

The consolidated financial statements include the accounts of VMware and subsidiaries in which VMware has a controlling financial interest. Non-controlling interests are presented as a separate component within total stockholders’ equity and represent the equity and cumulative pro-rata share of the results of operations attributable to the non-controlling interests. The portion of results of operations attributable to the non-controlling interests is eliminated in other income (expense), net on the consolidated statements of income (loss) and is not presented separately as the amount was not material for the periods presented. During 2016, VMware acquired all of the non-controlling interests previously presented as a separate component within total stockholders’ equity.

All intercompany transactions and account balances between VMware and its subsidiaries have been eliminated in consolidation. Transactions with Dell and its consolidated subsidiaries are generally settled in cash and are classified on the consolidated statements of cash flows based upon the nature of the underlying transaction.

Use of Accounting Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the reported amounts of revenue and expenses during the reporting periods, and the disclosure of contingent liabilities at the date of the financial statements. Estimates are used for, but not limited

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

to, trade receivable valuation, marketing development funds and rebates, useful lives assigned to fixed assets and intangible assets, valuation of goodwill and definite-lived intangibles, income taxes, stock-based compensation and contingencies. Actual results could differ from those estimates.

Revenue Recognition

VMware derives revenue primarily from licensing software under perpetual licenses and based on consumption, related software maintenance and support, training, consulting services and hosted services. Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or service has been provided, the sales price is fixed or determinable and collectibility is probable.

License Revenue

VMware sells most of its license software through distributors, resellers, system vendors, systems integrators and through its direct sales force. VMware recognizes revenue from the sale of its software licenses upon shipment, provided all other revenue recognition criteria have been met. VMware also rents its software to customers using a pay-as-you-go consumption model. Revenue from this selling model is generally recognized based upon the customer's reported usage. When software license arrangements are offered with new products that become available on a when-and-if-available basis, revenue associated with these arrangements is recognized ratably over the subscription period.

For software sold by system vendors that is bundled with their hardware, unless VMware has a separate license agreement which governs the transaction, revenue is recognized in arrears upon the receipt of royalty reports.

Services Revenue

VMware's services revenue generally consists of software maintenance and support, training, consulting services and hosted services. Software maintenance and support offerings entitle customers to receive major and minor product upgrades on a when-and-if-available basis and technical support. Revenue from software maintenance and support offerings is generally recognized ratably over the contract period.

Professional services include design, implementation and training. Professional services are not considered essential to the functionality of VMware's products as these services do not alter the intended product capabilities and may be performed by customers or other vendors. Revenue from professional services engagements performed for a fixed fee, for which VMware is able to make reasonably dependable estimates of progress toward completion, is recognized on a proportional performance basis assuming all other revenue recognition criteria are met. Revenue from professional services engagements invoiced on a time and materials basis is recognized as the hours are incurred.

VMware's hosted services consist of certain software offerings sold as a service without the customer's ability to take possession of the software over the subscription term. These arrangements are offered to VMware's customers over a specified period of time and revenue is recognized equally in both license and services revenue ratably over the subscription term commencing upon delivery of the service. Hosted services are also provided on a consumption basis with revenue recognized commensurate with the customer's usage of the related services.

Rebate Reserves and Marketing Development Funds

Rebates are offered to certain channel partners, which are recognized as a reduction to revenue or unearned revenue. Rebates based on actual partner sales are recognized as a reduction to revenue as the underlying revenue is recognized. Rebates earned based upon partner achievement of cumulative level of sales are recognized as a reduction of revenue proportionally for eligible sales required to achieve the target.

VMware participates in marketing development programs with certain channel partners wherein VMware reimburses its partners for certain direct costs incurred by the partners for marketing-related expenses or other services under the terms of the programs. Reimbursed costs to channel partners are recognized as a reduction of revenue based upon the maximum potential liability. The difference between the maximum potential liability recognized and the actual amount paid out has not been material to date.

Returns Reserves

With limited exceptions, VMware's return policy does not allow product returns for a refund. VMware estimates and records reserves for product returns at the time of sale based on historical return rates. Amounts are recorded as a reduction of revenue or unearned revenue. Returns reserves were not material for all periods presented.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Multiple-Element Arrangements

VMware enters into multiple-element revenue arrangements in which a customer may purchase a combination of software, maintenance and support, training, consulting services and hosted services. For multiple-element arrangements with software elements, VMware allocates and defers revenue for the undelivered elements based on fair value using vendor-specific objective evidence (“VSOE”) and applies the residual method to allocate the remaining fee to the delivered products and services. If a product or service included in a software-related multiple-element arrangement has not been delivered, and is not considered essential to the functionality of the delivered products or services, VMware must determine the fair value of each undelivered product or service using VSOE. Absent VSOE, revenue is deferred until VSOE of fair value exists for each of the undelivered products or services, or until all elements of the arrangement have been delivered. However, if the only undelivered element without VSOE is maintenance and support, the entire arrangement fee is recognized ratably over the performance period.

VSOE of fair value for an undelivered element is generally based on historical stand-alone sales to third parties. In limited instances, for an offering that is not yet sold, VSOE is the price established by management, including contractual renewal rate, if it is probable that the price will not change when introduced to the marketplace. In determining VSOE of fair value, VMware requires that the selling prices for a product or service fall within a reasonable pricing range. VMware has established VSOE for its software maintenance and technical support services, consulting services and training.

For multiple-element arrangements that contain software and non-software elements, VMware allocates revenue to software or software-related elements as a group and any non-software elements separately based on relative selling prices using the selling price hierarchy. The relative selling price for each deliverable is determined using VSOE, if it exists, or third-party evidence (“TPE”) of selling price. TPE of selling price is based on evaluation of prices charged for competitor products or services sold to similarly situated customers. As VMware’s offerings contain significant proprietary technology and provide different features and functionality, comparable prices of similar products typically cannot be obtained and relied upon.

If neither VSOE nor TPE of selling price exists for a deliverable, VMware uses its best estimate of selling price (“BESP”) for that deliverable. The objective of BESP is to determine the price at which VMware would transact a sale if the product or service were sold on a stand-alone basis. VMware determines BESP by considering its overall pricing objectives and practices across different sales channels and geographies, market conditions, and historical sales. VMware uses BESP in the allocation of arrangement consideration for non-software elements. Once value is allocated to software or software-related elements as a group, revenue is then recognized when the relevant revenue recognition criteria are met.

A specified upgrade obligation is created in the event VMware publicly announces new specific features, functionalities or entitlements to software upgrades or license products that have not been made available. VMware generally does not have VSOE of fair value for specified upgrades or license products. Accordingly, revenue recognition is deferred for multiple-element arrangements that entitle a customer to specified upgrades or new license products until the product obligations have been fulfilled.

Unearned revenue substantially consists of customer billings and payments received in advance of revenue recognition for products and services described above.

Foreign Currency Remeasurement

The United States (“U.S.”) dollar is the functional currency of VMware’s foreign subsidiaries. VMware records net gains and losses resulting from foreign exchange transactions as a component of foreign currency exchange gains and losses in other income (expense), net on the consolidated statements of income (loss). These gains and losses are net of those recognized on foreign currency forward contracts (“forward contracts”) not designated as hedges that VMware enters into to partially mitigate its exposure to foreign currency fluctuations. A net gain of \$10 million and a net loss of \$11 million were recognized during the years ended February 2, 2018 and December 31, 2015, respectively. Net gains and losses during the year ended December 31, 2016 and the Transition Period were not significant.

Cash and Cash Equivalents, Short-Term Investments, and Restricted Cash

VMware invests primarily in money market funds, highly liquid debt instruments of the U.S. government and its agencies, municipal obligations, and U.S. and foreign corporate debt securities. All highly liquid investments with maturities of 90 days or less from date of purchase are classified as cash equivalents and all highly liquid investments with maturities of greater than 90 days from date of purchase as short-term investments. Short-term investments are classified as available-for-sale securities. VMware may sell these securities at any time for use in current operations or for other purposes, such as consideration for acquisitions and strategic investments.

Fixed income investments are reported at market value and unrealized gains and losses on these investments, net of taxes, are included in accumulated other comprehensive income (loss), a component of stockholders’ equity. Realized gains or losses

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

are included on the consolidated statements of income (loss). Gains and losses on the sale of fixed income securities issued by the same issuer and of the same type are determined using the first-in first-out (“FIFO”) method. When a determination has been made that an other-than-temporary decline in fair value has occurred, the amount of the decline that is related to a credit loss is realized and is included on the consolidated statements of income (loss).

Cash balances that are restricted pursuant to the terms of various agreements are classified as restricted cash and included in other current assets and other assets in the accompanying consolidated balance sheets. As of February 2, 2018 and February 3, 2017, the total amount of VMware’s restricted cash was \$32 million and \$19 million, respectively.

As of February 2, 2018, VMware’s total cash, cash equivalents and short-term investments were \$11,653 million, of which \$8,609 million was held outside the U.S.

Allowance for Doubtful Accounts

VMware maintains an allowance for doubtful accounts for estimated losses on uncollectible accounts receivable. The allowance for doubtful accounts considers such factors as creditworthiness of VMware’s customers, historical experience, the age of the receivable, and current economic conditions. The allowance for doubtful accounts was insignificant for all periods presented.

Property and Equipment, Net

Property and equipment, net is recorded at cost. Depreciation commences upon placing the asset in service and is recognized on a straight-line basis over the estimated useful life of the assets, as follows:

Buildings	Term of underlying land lease
Land improvements	15 years
Furniture and fixtures	7 years
Equipment	3 to 6 years
Software	3 to 8 years
Leasehold improvements	20 years, not to exceed the shorter of the estimated useful life or remaining lease term

Upon retirement or disposition, the asset cost and related accumulated depreciation are removed with any gain or loss recognized on the consolidated statements of income (loss). Repair and maintenance costs that do not extend the economic life of the underlying assets are expensed as incurred.

Capitalized Software Development Costs

Costs associated with internal-use software systems, including those used to provide hosted services, during the application development stage are capitalized. Capitalization of costs begins when the preliminary project stage is completed, management has committed to funding the project, and it is probable that the project will be completed and the software will be used to perform the function intended. Capitalization ceases at the point when the project is substantially complete and is ready for its intended purpose. The capitalized amounts are included in property and equipment, net on the consolidated balance sheets.

Development costs of software to be sold, leased, or otherwise marketed are subject to capitalization beginning when technological feasibility for the product has been established and ending when the product is available for general release. During the years presented, software development costs incurred for products during the time period between reaching technological feasibility and general release were not material and accordingly were expensed as incurred.

Business Combinations

For business combinations, VMware recognizes the identifiable assets acquired, the liabilities assumed, and any non-controlling interests in an acquiree, which are measured based on the acquisition date fair value. Goodwill is measured as the excess of consideration transferred over the net amounts of the identifiable tangible and intangible assets acquired and the liabilities assumed at the acquisition date.

VMware uses significant estimates and assumptions, including fair value estimates, to determine the fair value of assets acquired and liabilities assumed and the related useful lives of the acquired assets, when applicable, as of the acquisition date. When those estimates are provisional, VMware refines them as necessary during the measurement period. The measurement period is the period after the acquisition date, not to exceed one year, in which VMware may gather and analyze the necessary information about facts and circumstances that existed as of the acquisition date to adjust the provisional amounts recognized.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Measurement period adjustments are recorded during the period in which the adjustment amount is determined. All other adjustments are recorded to the consolidated statements of income (loss).

Costs to effect an acquisition are recorded in general and administrative expenses on the consolidated statements of income (loss) as the expenses are incurred. Gains recognized for the remeasurement of ownership interest to fair value upon completion of a step acquisition are recorded in other income (expense), net on the consolidated statements of income (loss).

Purchased Intangible Assets and Goodwill

Goodwill is evaluated for impairment during the third quarter of each year or more frequently if events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. VMware elected to perform a quantitative assessment of goodwill with respect to its one reporting unit. In doing so, VMware compared the enterprise fair value to the carrying amount of the reporting unit, including goodwill. VMware concluded that, to date, there have been no impairments of goodwill.

Purchased intangible assets with finite lives are generally amortized over their estimated useful lives using the straight-line method. VMware reviews intangible assets for impairment whenever events or changes in business circumstances indicate that the carrying amounts of the assets may not be fully recoverable or that the useful lives of these assets are no longer appropriate.

VMware previously evaluated goodwill for impairment during the fourth quarter of each year. Effective January 1, 2017, the Company changed its fiscal year end from December 31 of each calendar year to a 52- or 53-week period ending on the Friday nearest to January 31 of each year. During the third quarter of fiscal 2018, VMware changed the date of its annual goodwill impairment test from the fourth quarter to the third quarter. Management believes this voluntary change is preferable as the timing of its annual goodwill impairment test during the third quarter aligns with Dell's. The goodwill impairment test date change was applied prospectively for the fiscal year beginning February 3, 2017 and had no effect on the Company's consolidated financial statements as of February 2, 2018 and February 3, 2017.

Derivative Instruments and Hedging Activities

Derivative instruments are measured at fair value and reported as current assets and current liabilities on the consolidated balance sheets, as applicable.

To manage VMware's exposure to foreign currency fluctuations, VMware enters into forward contracts to hedge a portion of VMware's net outstanding monetary asset or liability positions. These forward contracts are generally entered into on a monthly basis, with a typical contractual term of one month. These forward contracts are not designated as hedging instruments under applicable accounting guidance and therefore are adjusted to fair value through other income (expense), net on the consolidated statements of income (loss).

Additionally, VMware enters into forward contracts which it designates as cash flow hedges to manage the volatility of cash flows that relate to operating expenses denominated in certain foreign currencies. These forward contracts are entered into annually, have maturities of twelve months or less, and are adjusted to fair value through accumulated other comprehensive income (loss), net of tax, on the consolidated balance sheets. When the underlying expense transaction occurs, the gains or losses on the forward contract are subsequently reclassified from accumulated other comprehensive loss to the related operating expense line item on the consolidated statements of income (loss).

The Company does not, and does not intend to, use derivative financial instruments for trading or speculative purposes.

Employee Benefit Plans

The Company has a defined contribution program for U.S. employees that complies with Section 401(k) of the Internal Revenue Code. In addition, the Company offers defined contribution plans to employees in certain countries outside the U.S. During the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period, the Company contributed \$98 million, \$86 million, \$78 million and \$12 million, respectively, to its defined contribution plans.

Advertising

Advertising costs are expensed as incurred. Advertising expense was \$36 million, \$21 million and \$22 million during the years ended February 2, 2018, December 31, 2016 and December 31, 2015, respectively. Advertising expense during the Transition Period was not significant.

Income Taxes

Income taxes as presented herein are calculated on a separate tax return basis, although VMware is included in the consolidated tax return of Dell. However, under certain circumstances, transactions between VMware and Dell are assessed using consolidated tax return rules. Deferred tax assets and liabilities are recognized for the expected future tax consequences of

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the tax basis of assets and liabilities and their reported amounts using enacted tax rates in effect for the year in which the differences are expected to reverse. Tax credits are generally recognized as reductions of income tax provisions in the year in which the credits arise. The measurement of deferred tax assets is reduced by a valuation allowance if, based upon available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Tax Cuts and Jobs Act enacted on December 22, 2017 (the “2017 Tax Act”) introduces significant changes to U.S. income tax law including a mandatory one-time transition tax on accumulated earnings of foreign subsidiaries and a reduction of the U.S. statutory corporate income tax rate from 35% to 21%, effective January 1, 2018. During December 2017, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (“SAB 118”), which allows recognition of provisional tax amounts during a measurement period not to extend beyond one year of the enactment date. Due to the timing of the enactment and the complexity involved in applying the provisions of the 2017 Tax Act, the Company has made reasonable estimates for these effects and recorded provisional amounts on its consolidated financial statements for fiscal 2018. The Company has not yet finalized its calculation of the total foreign earnings and profits for its respective foreign subsidiaries. In addition, the Company does not have sufficient information available, prepared or analyzed to develop a reasonable estimate of the deferred tax liability related to remaining outside basis differences, withholding taxes, certain state taxes, and other items; as such, the Company has not estimated these impacts as permitted by SAB 118.

Provisional taxes relating to the effect of the tax law changes, including the estimated transition tax and the remeasurement of U.S. deferred tax assets and liabilities, among others, were recognized during fiscal 2018. As the Company completes its analysis of the 2017 Tax Act, collects and prepares necessary data, and interprets any additional guidance issued by the U.S. Treasury Department, the IRS, and other standard-setting bodies and relevant authorities, it may make adjustments to provisional amounts that it has recorded that may materially impact its provision for income taxes in the period in which the adjustments are made. The Company expects to complete its analysis within the measurement period permitted under SAB 118.

The Global Intangible Low-Taxed Income (“GILTI”) provisions of the 2017 Tax Act require the Company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary’s tangible assets. GAAP allows the Company to choose between an accounting policy which treats the U.S. tax under GILTI provisions as either a current expense, as incurred, or as a component of the Company’s measurement of deferred taxes. Due to the timing of the enactment and the complexity involved in applying the GILTI provisions, the Company does not have sufficient information available, prepared or analyzed to develop a reasonable estimate or establish an accounting policy for GILTI; therefore, it has not recorded any tax impacts associated with GILTI on its consolidated financial statements for fiscal 2018.

VMware is subject to tax in the U.S. and in multiple foreign tax jurisdictions. VMware’s U.S. liquidity needs are currently satisfied using cash flows generated from the Company’s U.S. operations, borrowings, or both. The Company also utilizes a variety of tax planning strategies in an effort to ensure that its worldwide cash is available in locations in which it is needed. Prior to the year ended February 2, 2018, the Company did not recognize a deferred tax liability related to undistributed foreign earnings of its subsidiaries because such earnings were considered to be indefinitely reinvested in its foreign operations, or were remitted substantially free of U.S. tax. Under the 2017 Tax Act, all foreign earnings are subject to U.S. taxation. As a result, the Company now expects to repatriate a substantial portion of its foreign earnings over time, to the extent that the foreign earnings are not restricted by local laws or result in significant incremental costs associated with repatriating the foreign earnings. The Company has recorded a provisional estimate for the transition tax on these earnings.

The difference between the income taxes payable or receivable that is calculated on a separate return basis and the amount paid to or received from Dell pursuant to VMware’s tax sharing agreement is presented as a component of additional paid-in capital, generally in the period in which the consolidated return is filed. Refer to Note N for further information.

Net Income (Loss) Per Share

Basic net income (loss) per share is calculated using the weighted-average number of shares of VMware’s common stock outstanding during the period. Diluted net income (loss) per share is calculated using the weighted-average number of common shares, including the dilutive effect of equity awards as determined under the treasury stock method. VMware has two classes of common stock, Classes A and B. For purposes of calculating net income (loss) per share, VMware uses the two-class method. As both classes share the same rights in dividends, basic and diluted net income (loss) per share are the same for both classes.

Concentrations of Risks

Financial instruments, which potentially subject VMware to concentrations of credit risk, consist principally of cash and cash equivalents, short-term investments and accounts receivable. Cash on deposit with banks may exceed the amount of insurance provided on such deposits. These deposits may be redeemed upon demand. VMware places cash and cash equivalents and short-term investments primarily in money market funds and fixed income securities and limits the amount of investment

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

with any single issuer and any single financial institution. VMware holds a diversified portfolio of money market funds and fixed income securities, which primarily consist of various highly liquid debt instruments of the U.S. government and its agencies, municipal obligations, and U.S. and foreign corporate debt securities. VMware's fixed income investment portfolio is denominated in U.S. dollars and consists of securities with various maturities.

VMware manages counterparty risk through necessary diversification of the investment portfolio among various financial institutions and by entering into derivative contracts with financial institutions that are of high credit quality.

VMware provides credit to its customers, including distributors, original equipment manufacturers ("OEMs"), resellers, and end-user customers, in the normal course of business. To reduce credit risk, VMware performs periodic credit evaluations, which consider the customer's payment history and financial stability.

As of February 2, 2018 and February 3, 2017, one distributor accounted for 18% and 20%, respectively, of VMware's accounts receivable balance, and another distributor accounted for 17% and 13%, respectively, of VMware's accounts receivable balance. A third distributor accounted for 11% of VMware's accounts receivable balance as of February 2, 2018 and February 3, 2017.

One distributor accounted for 15% of revenue in each of the years ended February 2, 2018, December 31, 2016 and December 31, 2015, respectively, and 16% of revenue during the Transition Period. Another distributor accounted for 11% of revenue during the year ended February 2, 2018 and 12% of revenue in each of the years ended December 31, 2016 and December 31, 2015 and the Transition Period, respectively. A third distributor accounted for 10% of revenue in each of the years ended February 2, 2018 and December 31, 2016 and the Transition Period, respectively, and 11% of revenue during the year ended December 31, 2015.

Accounting for Stock-Based Compensation

VMware restricted stock, including performance stock unit ("PSU") awards, are valued based on the Company's stock price on the date of grant. For those awards expected to vest which only contain a service vesting feature, compensation cost is recognized on a straight-line basis over the awards' requisite service periods.

PSU awards will vest if certain VMware-designated performance targets, including in certain cases a time-based or market-based vesting component, are achieved. All PSU awards also include a time-based vesting component. If minimum performance thresholds are achieved, each PSU award will convert into VMware's Class A common stock at a defined ratio depending on the degree of achievement of the performance target designated by each individual award. If minimum performance thresholds are not achieved, then no shares will be issued. Based upon the expected levels of achievement, stock-based compensation is recognized on a straight-line basis over the PSUs' requisite service periods. The expected levels of achievement are reassessed over the requisite service periods and, to the extent that the expected levels of achievement change, stock-based compensation is adjusted and recorded on the consolidated statements of income (loss) and the remaining unrecognized stock-based compensation is recognized over the remaining requisite service period.

The Black-Scholes option-pricing model is used to determine the fair value of VMware's stock option awards and Employee Stock Purchase Plan (the "ESPP") shares. The Black-Scholes model includes assumptions regarding dividend yields, expected volatility, expected term and risk-free interest rates. These assumptions reflect the Company's best estimates, but these items involve uncertainties based on market and other conditions outside of the Company's control.

New Accounting Pronouncements

Topic 606, Revenue from Contracts with Customers

During May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers (Topic 606). In 2016, the FASB issued ASU 2016-08, ASU 2016-10 and ASU 2016-12, which provide interpretive clarifications on the guidance in Topic 606 (collectively, "Topic 606"). The updated revenue standard replaces all existing revenue recognition guidance under GAAP and establishes common principles for recognizing revenue for all industries. It also provides guidance on the accounting for costs to fulfill or obtain a customer contract. The core principle underlying the updated standard is the recognition of revenue based on consideration expected to be entitled from the transfer of goods or services to a customer. The updated standard is effective for interim and annual periods beginning after December 15, 2017 and permits the use of either the full retrospective or cumulative effect transition method.

VMware plans to adopt Topic 606 using the full retrospective transition method when it becomes effective for the Company in the first quarter of fiscal 2019. Currently, VMware defers license revenue related to the sale of perpetual licenses in the event certain revenue recognition criteria are not met. This would include transactions that offer undelivered future products including emerging products that are offered as part of product promotions, where VSOE of fair value has not been established. However, under Topic 606, VMware would generally expect that substantially all license revenue related to the sale of perpetual licenses

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

will be recognized upon delivery. In addition, under Topic 606, revenue from on-premise license sales to OEMs or rental of on-premise licenses to the Company's VMware Cloud Provider Program ("VCP") partners will be recognized when the sale or usage occurs. As a result, for periods where reporting of sales or consumption by OEMs or VCP partners, respectively, are not available, revenue will be recognized based on estimated sales or usage.

The net impact of adopting Topic 606 to license and total revenue is not expected to be material for the year ended February 2, 2018. Deferred license revenue as of February 2, 2018 is expected to decrease by approximately \$350 million, primarily due to the acceleration of revenue recognition for on-premise license sales that were deferred under previous accounting guidance, and due to prepayments on contracts with various cancellation rights. In limited situations, VMware's contracts include termination clauses allowing customers to terminate without penalty. Under Topic 606, prepayments received from customers for contracts, or a portion of a contract, subject to termination without penalty will be recorded as a customer deposit in accrued expenses and other on the consolidated balance sheets. Under previous guidance, prepayments received from customers were recorded in unearned revenue on the consolidated balance sheets.

Topic 606 is also expected to impact the timing and recognition of costs to obtain contracts with customers, such as commissions. Incremental costs to obtain contracts with customers are deferred and recognized over the expected period of benefit. As a result, additional commission costs will be deferred and amortized over a longer duration. Other assets are expected to increase by approximately \$600 million as of February 2, 2018 due to the treatment of commission costs under Topic 606. In addition, sales and marketing expense under Topic 606 is expected to decrease by approximately \$90 million for the year ended February 2, 2018, primarily due to the treatment of commission costs.

VMware is continuing to evaluate the effect that Topic 606 will have on its consolidated financial statements, including the impact on income tax expense and related balance sheet accounts. In preparation for the adoption of the updated standard, VMware has implemented a new revenue recognition software to enable the Company to perform the accounting assessment related to the standard and is in the process of implementing internal controls. The preliminary adjustments under Topic 606 may differ from the final adjusted consolidated financial statements for fiscal 2018.

ASU No. 2016-02, Leases

During February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which requires a lessee to recognize a lease liability for the obligation to make lease payments and a right-of-use asset for the right to use the underlying asset for the lease term. The updated standard also requires additional disclosure regarding leasing arrangements. It is effective for interim and annual periods beginning after December 15, 2018 and requires a modified retrospective adoption, with early adoption permitted. VMware is currently evaluating the effect that the updated standard will have on its consolidated financial statements and related disclosures, and expects that most of its lease commitments will be subject to the updated standard and recognized as lease liabilities and right-of-use assets upon adoption.

ASU No. 2016-16, Income Taxes

During October 2016, the FASB issued ASU No. 2016-16, Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory (Topic 740), which requires entities to recognize at the transaction date the income tax consequences of intra-entity asset transfers. Previous guidance required the tax effects from intra-entity asset transfers to be deferred until that asset is sold to a third party or recovered through use. The updated standard is effective for annual and interim periods beginning after December 15, 2017 and requires a modified retrospective transition method. Historically, VMware transferred intellectual property between its legal entities. While VMware is continuing to assess the potential effects, transfers of intellectual property between its legal entities occurring after the adoption of the updated standard could have a material impact on the Company's consolidated statements of income (loss) in the period that the transfer occurs.

ASU No. 2016-09, Compensation

VMware adopted ASU No. 2016-09, Compensation—Stock Compensation (Topic 718), on a prospective basis, effective February 4, 2017. Prior periods have not been reclassified to conform to the fiscal 2018 presentation. Net excess tax benefits recognized in connection with stock-based awards are included in the income tax provision on the consolidated statements of income (loss). Net excess tax benefits recognized during the year ended February 2, 2018 were \$106 million. Prior to adopting the updated standard, such amounts were recognized in additional paid-in capital on the Company's consolidated balance sheets.

Additionally, all tax-related cash flows resulting from stock-based awards are reported as operating activities in the statements of cash flows. Prior to adopting the updated standard, excess tax benefits were reported as a cash inflow from financing activities in the statements of cash flows.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

B. Related Parties

The information provided below includes a summary of the transactions entered into with Dell and Dell's consolidated subsidiaries, including EMC (collectively, "Dell") from the effective date of the Dell Acquisition through February 2, 2018. Transactions prior to the effective date of the Dell Acquisition reflect transactions only with EMC and its consolidated subsidiaries.

Transactions with Dell

VMware and Dell engaged in the following ongoing intercompany transactions, which resulted in revenue and receipts and unearned revenue for VMware:

- Pursuant to OEM and reseller arrangements, Dell integrates or bundles VMware's products and services with Dell's products and sells them to end users. Dell also acts as a distributor, purchasing VMware's standalone products and services for resale to end-user customers through VMware-authorized resellers. Revenue under these arrangements is presented net of related marketing development funds and rebates paid to Dell.
- Dell purchases products and services from VMware for its internal use.
- VMware provides professional services to end users based upon contractual agreements with Dell.
- Pursuant to an ongoing distribution agreement, VMware acts as the selling agent for certain products and services of Pivotal Software, Inc. ("Pivotal"), a subsidiary of Dell, in exchange for an agency fee. Under this agreement, cash is collected from the end user by VMware and remitted to Pivotal, net of the contractual agency fee.
- VMware provides various services to Pivotal. Support costs incurred by VMware are reimbursed to VMware and are recorded as a reduction to the costs incurred by VMware.

Dell purchases VMware products and services directly from VMware, as well as through VMware's channel partners. Information about VMware's revenue and receipts, and unearned revenue from such arrangements, for the periods presented consisted of the following (table in millions):

	Revenue and Receipts				Unearned Revenue	
	For the Year Ended			Transition Period	As of	
	February 2,	December 31,	December 31,	January 1 to	February 2,	February 3,
	2018	2016	2015	February 3,	2018	2017
				2017		
Reseller revenue	\$ 1,220	\$ 508	\$ 301	\$ 44	\$ 1,248	\$ 616
Internal-use revenue	40	35	17	7	10	18
Professional services revenue	105	115	100	3	—	—
Agency fee revenue	2	4	6	—	—	—
Reimbursement for services to Pivotal	—	1	4	—	n/a	n/a

VMware and Dell engaged in the following ongoing intercompany transactions, which resulted in costs to VMware:

- VMware purchases and leases products and purchases services from Dell.
- From time to time, VMware and Dell enter into agreements to collaborate on technology projects, and VMware pays Dell for services provided to VMware by Dell related to such projects.
- In certain geographic regions where VMware does not have an established legal entity, VMware contracts with Dell subsidiaries for support services and support from Dell personnel who are managed by VMware. The costs incurred by Dell on VMware's behalf related to these employees are charged to VMware with a mark-up intended to approximate costs that would have been incurred had VMware contracted for such services with an unrelated third party. These costs are included as expenses on VMware's consolidated statements of income (loss) and primarily include salaries, benefits, travel and occupancy expenses. Dell also incurs certain administrative costs on VMware's behalf in the U.S. that are recorded as expenses on VMware's consolidated statements of income (loss).
- From time to time, VMware invoices end users on behalf of Dell for certain services rendered by Dell. Cash related to these services is collected from the end user by VMware and remitted to Dell.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Information about VMware's costs from such arrangements during the periods presented consisted of the following (table in millions):

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Purchases and leases of products and purchases of services	\$ 142	\$ 97	\$ 63	\$ 14
Collaborative technology project costs	—	—	5	—
Dell subsidiary support and administrative costs	123	105	100	13

VMware also purchases Dell products through Dell's channel partners. Purchases of Dell products through Dell's channel partners were not significant during the periods presented.

From time to time, VMware and Dell also enter into joint marketing and development arrangements, for which both parties may incur costs.

During the second quarter of fiscal 2018, VMware acquired Wavefront, Inc. ("Wavefront"). Upon closing of the acquisition, Dell was paid \$20 million in cash for its non-controlling ownership interest in Wavefront.

Dell Financial Services ("DFS")

DFS provided financing to certain of VMware's end customers based on the customer's discretion. Upon acceptance of the financing arrangement by both VMware's end customer and DFS, amounts classified as trade accounts receivable are reclassified to due from related parties, net on the consolidated balance sheets. Revenue recognized on transactions financed through DFS was recorded net of financing fees, which were \$25 million during the year ended February 2, 2018 and were not significant during the year ended December 31, 2016 and the Transition Period.

EMC Equity Awards Held by VMware Employees

In connection with the Dell Acquisition, vesting was accelerated for all outstanding EMC stock options and restricted stock units and stock options were automatically exercised on the last trading day prior to the effective date of the merger. VMware's portion of the expense associated with accelerated EMC equity awards held by VMware employees was \$7 million and was included within stock-based compensation expense on the consolidated statements of income (loss) during the year ended December 31, 2016.

Due To/From Related Parties, Net

Amounts due to and from related parties, net as of the periods presented consisted of the following (table in millions):

	February 2, 2018	February 3, 2017
Due (to) related parties	\$ (106)	\$ (85)
Due from related parties	638	178
Due from related parties, net	\$ 532	\$ 93

Amounts included in due from related parties, net, excluding DFS and tax obligations, are generally settled in cash within 60 days of each quarter-end.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Stock Purchase Arrangements with Dell

From time to time, VMware enters into stock purchase arrangements with Dell. The following table summarizes purchases of VMware Class A common stock from Dell, pursuant to stock purchase agreements entered into on December 15, 2016 and March 29, 2017 (aggregate purchase price in millions, shares in thousands):

	For the Year Ended	
	February 2, 2018	December 31, 2016
Aggregate purchase price	\$ 725	\$ 375
Class A common shares repurchased ⁽¹⁾	7,572	4,775
Weighted-average price per share	\$ 95.75	\$ 78.53

⁽¹⁾ The aggregate number of shares purchased was determined based upon a volume-weighted average price during a defined period, less an agreed upon discount.

VMware did not repurchase any shares of its Class A common stock from Dell during the Transition Period.

Notes Payable to Dell

On January 21, 2014, VMware entered into a note exchange agreement with Dell providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million, which consisted of outstanding principal due on the following dates: \$680 million due May 1, 2018, \$550 million due May 1, 2020 and \$270 million due December 1, 2022.

On August 21, 2017, VMware repaid two of the notes payable to Dell in the aggregate principal amount of \$1,230 million, representing repayment of the note due May 1, 2018 at par value and repayment of the note due May 1, 2020 at a discount. During the year ended February 2, 2018, VMware recognized a gain on extinguishment of debt of \$6 million, which was recorded in other income (expense), net on the consolidated statements of income (loss). The remaining note payable of \$270 million due December 1, 2022 may be prepaid without penalty or premium.

Interest is payable quarterly in arrears, at the annual rate of 1.75%. During the years ended February 2, 2018, December 31, 2016 and December 31, 2015, interest expense of \$16 million, \$26 million and \$26 million, respectively, was recognized. Interest expense during the Transition Period was not significant.

Pivotal

In April 2016, VMware contributed \$20 million in cash to Pivotal in exchange for additional preferred equity interests in Pivotal. VMware's ownership interest in Pivotal was 20% and 21% as of February 2, 2018 and February 3, 2017, respectively. This strategic investment is accounted for using the cost method.

C. Business Combinations, Definite-Lived Intangible Assets, Net and Goodwill

Business Combinations

Fiscal 2018

Acquisition of Velocloud Networks, Inc.

During the fourth quarter of fiscal 2018, VMware completed the acquisition of Velocloud Networks, Inc. ("Velocloud"), a provider of cloud-delivered software-defined wide-area network (SD-WAN) technology for enterprises and service providers. VMware acquired Velocloud to build on its network virtualization platform, VMware NSX, and to expand its networking portfolio. The total purchase price was \$449 million, net of cash acquired of \$24 million. The purchase price primarily included \$142 million of identifiable intangible assets and \$326 million of goodwill that is not expected to be deductible for tax purposes. The identifiable intangible assets primarily include completed technology of \$87 million and customer contracts of \$44 million, with estimated useful lives of six to seven years.

The fair value of assumed unvested equity awards attributed to post-combination services was \$30 million and will be expensed over the remaining requisite service periods on a straight-line basis. The estimated fair value of the stock options assumed by the Company was determined using the Black-Scholes option pricing model.

The initial allocation of the purchase price was based on a preliminary valuation and assumptions and is subject to change within the measurement period. VMware expects to finalize the allocation of the purchase price as soon as practicable and no later than one year from the acquisition date.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Prior to the closing of the acquisition, VMware held an ownership interest in Velocloud. Upon completion of the step acquisition, VMware recognized a gain of \$8 million in other income (expense), net for the remeasurement of its previously held ownership interest to fair value, which was \$12 million.

The pro forma financial information assuming the acquisition had occurred as of the beginning of the fiscal year prior to the fiscal year of acquisition, as well as the revenue and earnings generated during the current fiscal year, were not material for disclosure purposes.

Other 2018 Business Combinations

During the second quarter of fiscal 2018, VMware completed the acquisitions of Wavefront and Aptelligent, Inc., which were not material to the consolidated financial statements. The aggregate purchase price for the two acquisitions was \$238 million, net of cash acquired of \$35 million. The aggregate purchase price included \$36 million of identifiable intangible assets and \$238 million of goodwill that is not expected to be deductible for tax purposes. The identifiable intangible assets primarily relate to purchased technology, with estimated useful lives of five years. The fair value of assumed unvested equity awards attributed to post-combination services was \$37 million and will be expensed over the remaining requisite service periods on a straight-line basis. The estimated fair value of the stock options assumed by the Company was determined using the Black-Scholes option pricing model.

Prior to the closing of the acquisition, VMware held an ownership interest in Wavefront. Upon completion of the step acquisition, VMware recognized a gain of \$34 million in other income (expense), net for the remeasurement of its previously held ownership interest to fair value, which was \$49 million. Upon closing of the acquisition, Dell was paid \$20 million in cash for its non-controlling ownership interest in Wavefront.

The initial allocation of the purchase price was based on a preliminary valuation and assumptions and is subject to change within the measurement period. VMware expects to finalize the allocation of the purchase price as soon as practicable and no later than one year from the acquisition date.

The pro forma financial information assuming the acquisition had occurred as of the beginning of the fiscal year prior to the fiscal year of acquisition, as well as the revenue and earnings generated during the current fiscal year, were not material for disclosure purposes.

Fiscal 2016

Acquisition of Arkin Net, Inc.

On June 21, 2016, VMware acquired all of the outstanding shares of Arkin Net, Inc. ("Arkin") for approximately \$67 million of cash, net of liabilities assumed. VMware acquired Arkin, a provider of software-defined data center security and operations, as part of a strategy to accelerate customers' adoption of VMware NSX and software-defined data centers. The aggregate purchase price included \$39 million of goodwill and \$25 million of identifiable intangible assets. The identifiable intangible assets acquired were primarily related to purchased technology with estimated useful lives of four to five years. Goodwill was not deductible for U.S. income tax purposes.

The pro forma financial information assuming the acquisition had occurred as of the beginning of the calendar year prior to the year of acquisition, as well as the revenue and earnings generated during the current year, were not material for disclosure purposes.

Prior to the closing of the acquisition on June 21, 2016, Dell owned approximately 16% of the outstanding shares of Arkin. As a result of the acquisition, cash paid to Dell was approximately \$13 million.

Definite-Lived Intangible Assets, Net

The following table summarizes the changes in the carrying amount of definite-lived intangible assets during the periods presented (table in millions):

	February 2, 2018	February 3, 2017
Balance, beginning of the year	\$ 507	\$ 517
Additions to intangible assets related to business combinations	178	—
Amortization expense	(137)	(10)
Balance, end of the year	\$ 548	\$ 507

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

As of the periods presented , definite-lived intangible assets consisted of the following (amounts in tables in millions):

February 2, 2018				
	Weighted- Average Useful Lives (in years)	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Purchased technology	6.4	\$ 750	\$ (466)	\$ 284
Leasehold interest	34.9	149	(29)	120
Customer relationships and customer lists	7.8	177	(74)	103
Trademarks and tradenames	8.4	70	(31)	39
Other	5.7	5	(3)	2
Total definite-lived intangible assets		<u>\$ 1,151</u>	<u>\$ (603)</u>	<u>\$ 548</u>

February 3, 2017				
	Weighted- Average Useful Lives (in years)	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Purchased technology	6.5	\$ 641	\$ (366)	\$ 275
Leasehold interest	34.9	149	(24)	125
Customer relationships and customer lists	8.3	132	(64)	68
Trademarks and tradenames	8.7	61	(23)	38
Other	5.7	4	(3)	1
Total definite-lived intangible assets		<u>\$ 987</u>	<u>\$ (480)</u>	<u>\$ 507</u>

Amortization expense on definite-lived intangible assets was \$137 million , \$129 million , \$145 million and \$10 million during the years ended February 2, 2018 , December 31, 2016 and December 31, 2015 and the Transition Period , respectively.

Based on intangible assets recorded as of February 2, 2018 and assuming no subsequent additions, dispositions or impairment of underlying assets, the remaining estimated annual amortization expense over the next five fiscal years and thereafter is expected to be as follows (table in millions):

2019	148
2020	123
2021	69
2022	53
2023	30
Thereafter	125
Total	<u>\$ 548</u>

Goodwill

The following table summarizes the changes in the carrying amount of goodwill during the periods presented (table in millions):

	February 2, 2018	February 3, 2017
Balance, beginning of the year	\$ 4,032	\$ 4,032
Increase in goodwill related to business combinations	565	—
Balance, end of the year	<u>\$ 4,597</u>	<u>\$ 4,032</u>

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

D. Realignment and Loss on Disposition

Disposition of VMware vCloud Air Business

During the second quarter of fiscal 2018, VMware completed the sale of its VMware vCloud Air business (“vCloud Air”) to OVH US LLC (“OVH”). Losses recognized in connection with this transaction were \$90 million during the year ended February 2, 2018 and were recorded in realignment and loss on disposition on the consolidated statements of income (loss). Losses recognized on the disposition of vCloud Air include the impairment of fixed assets identified as part of the sale, as well as the costs associated with certain transition services, which primarily include employee-related expenses and costs associated with data-center colocation services. Transition services are to be provided over a period of 18 months, starting from the date of the sale.

In connection with the disposition of vCloud Air, \$35 million of total unearned revenue, which included \$18 million of unearned license revenue, was transferred to OVH during the second quarter of fiscal 2018.

Realignment

On January 22, 2016, VMware approved a plan to streamline its operations, with plans to reinvest the associated savings in field, technical and support resources related to growth products. As a result of these actions, approximately 800 positions were eliminated during the year ended December 31, 2016. VMware recognized \$50 million of severance-related realignment expenses during the year ended December 31, 2016 on the consolidated statements of income (loss). Additionally, VMware consolidated certain facilities as part of this plan, which resulted in the recognition of \$2 million of related expenses during the year ended December 31, 2016 on the consolidated statements of income (loss). Actions associated with this plan were substantially completed by December 31, 2016.

During the year ended December 31, 2015, VMware eliminated approximately 380 positions across all major functional groups and geographies to streamline its operations. As a result of these actions, \$23 million of realignment expenses were recognized during the year ended December 31, 2015 on the consolidated statements of income (loss).

The following table summarizes the activity for the accrued realignment expenses for the period presented (table in millions):

For the Year Ended December 31, 2016				
	Balance as of January 1, 2016	Realignment	Utilization	Balance as of December 31, 2016
Severance-related costs	\$ 3	\$ 50	\$ (52)	\$ 1
Costs to exit facilities	—	2	(1)	1
Total	\$ 3	\$ 52	\$ (53)	\$ 2

For the Year Ended December 31, 2015				
	Balance as of January 1, 2015	Realignment	Utilization	Balance as of December 31, 2015
Severance-related costs	\$ 8	\$ 23	\$ (28)	\$ 3

E. Net Income (Loss) Per Share

Basic net income (loss) per share is computed by dividing net income (loss) by the weighted-average number of common shares outstanding during the period. Diluted net income (loss) per share is computed by dividing net income by the weighted-average number of common shares outstanding and potentially dilutive securities outstanding during the period, as calculated using the treasury stock method. Potentially dilutive securities primarily include unvested restricted stock units, including performance stock units, and stock options, including purchase options under VMware’s employee stock purchase plan. Securities are excluded from the computation of diluted net income (loss) per share if their effect would be anti-dilutive. VMware uses the two-class method to calculate net income (loss) per share as both classes share the same rights in dividends, therefore basic and diluted earnings per share are the same for both classes.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table sets forth the computations of basic and diluted net income (loss) per share during the periods presented (table in millions, except per share amounts and shares in thousands):

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Net income (loss)	\$ 570	\$ 1,186	\$ 997	\$ (8)
Gain on stock purchase with Dell, net of tax	—	(8)	—	—
Net income (loss), as adjusted	\$ 570	\$ 1,178	\$ 997	\$ (8)
Weighted-average shares, basic for Classes A and B	406,738	420,520	424,003	408,625
Effect of stock purchase with Dell	—	7	—	—
Effect of other dilutive securities	6,630	3,467	2,544	—
Weighted-average shares, diluted for Classes A and B	413,368	423,994	426,547	408,625
Net income (loss) per weighted-average share, basic for Classes A and B	\$ 1.40	\$ 2.82	\$ 2.35	\$ (0.02)
Net income (loss) per weighted-average share, diluted for Classes A and B ⁽¹⁾	\$ 1.38	\$ 2.78	\$ 2.34	\$ (0.02)

⁽¹⁾ During the Transition Period, VMware incurred a net loss. As a result, all potentially dilutive securities were anti-dilutive and excluded from the computation of diluted net loss per share.

The following table sets forth the weighted-average common share equivalents of Class A common stock that were excluded from the diluted net income (loss) per share calculations during the periods presented, because their effect would have been anti-dilutive (shares in thousands):

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Anti-dilutive securities:				
Employee stock options	51	1,817	2,219	2,353
Restricted stock units	140	652	249	3,259
Total	191	2,469	2,468	5,612

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

F. Cash, Cash Equivalents and Investments

Cash, cash equivalents and investments as of the periods presented consisted of the following (tables in millions):

February 2, 2018				
	Cost or Amortized Cost	Unrealized Gains	Unrealized Losses	Aggregate Fair Value
Cash	\$ 423	\$ —	\$ —	\$ 423
Cash equivalents:				
Money-market funds	\$ 5,460	\$ —	\$ —	\$ 5,460
U.S. and foreign corporate debt securities	88	—	—	88
Total cash equivalents	\$ 5,548	\$ —	\$ —	\$ 5,548
Short-term investments:				
U.S. Government and agency obligations	\$ 965	\$ —	\$ (8)	\$ 957
U.S. and foreign corporate debt securities	4,503	1	(31)	4,473
Foreign governments and multi-national agency obligations	99	—	(1)	98
Mortgage-backed securities	123	—	(2)	121
Marketable available-for-sale equity securities	15	18	—	33
Total short-term investments	\$ 5,705	\$ 19	\$ (42)	\$ 5,682
February 3, 2017				
	Cost or Amortized Cost	Unrealized Gains	Unrealized Losses	Aggregate Fair Value
Cash	\$ 720	\$ —	\$ —	\$ 720
Cash equivalents:				
Money-market funds	\$ 2,471	\$ —	\$ —	\$ 2,471
Time deposits	26	—	—	26
Municipal obligations	3	—	—	3
Total cash equivalents	\$ 2,500	\$ —	\$ —	\$ 2,500
Short-term investments:				
U.S. Government and agency obligations	\$ 733	\$ —	\$ (3)	\$ 730
U.S. and foreign corporate debt securities	3,884	3	(16)	3,871
Foreign governments and multi-national agency obligations	32	—	—	32
Municipal obligations	350	—	—	350
Asset-backed securities	4	—	—	4
Mortgage-backed securities	188	—	(2)	186
Total short-term investments	\$ 5,191	\$ 3	\$ (21)	\$ 5,173
Other assets:				
Marketable available-for-sale equity securities	\$ 15	\$ 7	\$ —	\$ 22

During the first quarter of fiscal 2018, marketable available-for-sale equity securities were reclassified to short-term investments on the consolidated balance sheets, as restrictions on the Company's ability to sell the common stock lapsed within twelve months of the balance sheet date. As of February 3, 2017, these securities were classified as other assets on the consolidated balance sheets.

VMware evaluated its available-for-sale investments as of February 2, 2018 and February 3, 2017 for other-than-temporary declines in fair value and did not consider any to be other-than-temporarily impaired. The realized gains and losses on

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

investments during the years ended February 2, 2018 , December 31, 2016 and December 31, 2015 and the Transition Period were not significant.

Unrealized losses on cash equivalents and available-for-sale investments, which have been in a net loss position for less than twelve months as of the periods presented, were classified by sector as follows (table in millions):

	February 2, 2018		February 3, 2017	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. and foreign corporate debt securities	\$ 3,100	\$ (22)	\$ 2,287	\$ (16)

As of the periods presented, unrealized losses on cash equivalents and available-for-sale investments in the other investment categories, which have been in a net loss position for less than twelve months, were not significant. Unrealized losses on cash equivalents and available-for-sale investments, which have been in a net loss position for twelve months or greater, were not significant as of February 2, 2018 and February 3, 2017 .

Contractual Maturities

The contractual maturities of fixed income securities included in short-term investments on the consolidated balance sheets and held as of February 2, 2018 , consisted of the following (table in millions):

	Amortized Cost Basis	Aggregate Fair Value
Due within one year	\$ 2,164	\$ 2,160
Due after 1 year through 5 years	3,351	3,318
Due after 5 years through 10 years	95	93
Due after 10 years	80	78
Total fixed income securities	\$ 5,690	\$ 5,649

G. Debt

Long-term Debt

On August 21, 2017, VMware issued three series of unsecured senior notes ("Senior Notes") pursuant to a public debt offering. The proceeds from the issuance were \$3,961 million , net of debt discount of \$9 million and debt issuance costs of \$30 million .

The carrying value of the Senior Notes as of February 2, 2018 was as follows (amounts in millions):

	February 2, 2018	Effective Interest Rate
Long-term debt:		
2.30% Senior Note Due August 21, 2020	\$ 1,250	2.56%
2.95% Senior Note Due August 21, 2022	1,500	3.17%
3.90% Senior Note Due August 21, 2027	1,250	4.05%
Total principal amount	4,000	
Less: unamortized discount	(8)	
Less: unamortized debt issuance costs	(28)	
Net carrying amount	\$ 3,964	

Interest is payable semiannually in arrears, on February 21 and August 21 of each year. During the year ended February 2, 2018 , \$58 million of interest expense, which included amortization of discount and issuance costs, was recognized on the consolidated statements of income (loss). The discount and issuance costs are amortized over the term of the Senior Notes on a straight-line basis, which approximates the effective interest method.

The Senior Notes are redeemable in whole at any time or in part from time to time at VMware's option, subject to a make-whole premium. In addition, upon the occurrence of certain change-of-control triggering events and certain downgrades of the

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

ratings on the Senior Notes, VMware may be required to repurchase the notes at a repurchase price equal to 101% of the aggregate principal plus any accrued and unpaid interest on the date of purchase. The Senior Notes rank equally in right of payment with VMware's other unsecured and unsubordinated indebtedness. The Senior Notes also include restrictive covenants that, in certain circumstances, limit VMware's ability to create certain liens, to enter into certain sale and leaseback transactions and to consolidate, merge, sell or otherwise dispose of all or substantially all of VMware's assets.

Refer to Note B for information regarding the notes payable to Dell.

Revolving Credit Facility

On September 12, 2017, VMware entered into an unsecured credit agreement establishing a revolving credit facility ("Credit Facility") with a syndicate of lenders that provides the Company with a borrowing capacity of up to \$1,000 million, which may be used for general corporate purposes. Commitments under the Credit Facility are available for a period of five years, which may be extended, subject to the satisfaction of certain conditions, by up to two one-year periods. As of February 2, 2018, there were no outstanding borrowings under the Credit Facility. The credit agreement contains certain representations, warranties and covenants. Commitment fees, interest rates and other terms of borrowing under the Credit Facility may vary based on VMware's external credit ratings. The amount paid in connection with the ongoing commitment fee, which is payable quarterly in arrears, was not significant during the year ended February 2, 2018.

H. Fair Value Measurements

Assets and Liabilities Measured and Recorded at Fair Value on a Recurring Basis

Certain financial assets and liabilities are measured at fair value on a recurring basis. VMware determines fair value using the following hierarchy:

- Level 1 - Quoted prices in active markets for identical assets or liabilities;
- Level 2 - Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are noted as being active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

VMware's fixed income securities were primarily classified as Level 2, with the exception of some of the U.S. Government and agency obligations that were classified as Level 1. Additionally, VMware's Level 2 classification included forward contracts, notes payable to Dell and the Senior Notes.

As of February 2, 2018 and February 3, 2017, VMware's Level 2 investment securities were generally priced using non-binding market consensus prices that were corroborated by observable market data, quoted market prices for similar instruments, or pricing models such as discounted cash flow techniques.

VMware did not have any significant assets or liabilities that were classified as Level 3 of the fair value hierarchy for the periods presented, and there have been no transfers between fair value measurement levels during the periods presented.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following tables set forth the fair value hierarchy of VMware's cash equivalents, short-term investments and derivatives that were required to be measured at fair value as of the periods presented (tables in millions):

	February 2, 2018		
	Level 1	Level 2	Total
Cash equivalents:			
Money-market funds	\$ 5,460	\$ —	\$ 5,460
U.S. and foreign corporate debt securities	—	88	88
Total cash equivalents	\$ 5,460	\$ 88	\$ 5,548
Short-term investments:			
U.S. Government and agency obligations	\$ 684	\$ 273	\$ 957
U.S. and foreign corporate debt securities	—	4,473	4,473
Foreign governments and multi-national agency obligations	—	98	98
Mortgage-backed securities	—	121	121
Marketable available-for-sale equity securities	33	—	33
Total short-term investments	\$ 717	\$ 4,965	\$ 5,682

	February 3, 2017		
	Level 1	Level 2	Total
Cash equivalents:			
Money-market funds	\$ 2,471	\$ —	\$ 2,471
Time deposits	—	26	26
Municipal obligations	—	3	3
Total cash equivalents	\$ 2,471	\$ 29	\$ 2,500
Short-term investments:			
U.S. Government and agency obligations	\$ 445	\$ 285	\$ 730
U.S. and foreign corporate debt securities	—	3,871	3,871
Foreign governments and multi-national agency obligations	—	32	32
Municipal obligations	—	350	350
Asset-backed securities	—	4	4
Mortgage-backed securities	—	186	186
Total short-term investments	\$ 445	\$ 4,728	\$ 5,173
Other current assets:			
Derivative due to stock purchase with Dell	\$ —	\$ 9	\$ 9
Other assets:			
Marketable available-for-sale equity securities	\$ 22	\$ —	\$ 22

The notes payable to Dell and the Senior Notes were not adjusted to fair value. The fair value of the notes payable to Dell was approximately \$246 million and \$1,492 million as of February 2, 2018 and February 3, 2017, respectively. The fair value of the Senior Notes was approximately \$3,863 million as of February 2, 2018. Fair value for both the notes payable to Dell and the Senior Notes was estimated primarily based on observable market interest rates (Level 2 inputs).

VMware offers a deferred compensation plan for eligible employees, which allows participants to defer payment for part or all of their compensation. The net impact to the consolidated statements of income (loss) is not significant since changes in the fair value of the assets substantially offset changes in the fair value of the liabilities. As such, assets and liabilities associated with this plan have not been included in the above tables. Assets associated with this plan were the same as the liabilities at approximately \$60 million and \$36 million as of February 2, 2018 and February 3, 2017, respectively, and are included in other assets and other liabilities on the consolidated balance sheets.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Assets Measured and Recorded at Fair Value on a Non-Recurring Basis

VMware holds strategic investments in its portfolio accounted for using the cost method. These strategic investments are periodically assessed for other-than-temporary impairment. VMware uses Level 3 inputs as part of its impairment analysis, including pre- and post-money valuations of recent financing events, the impact of financing events on its ownership percentages, and other available information relevant to the issuer's historical and forecasted performance. The estimated fair value of these investments is considered in VMware's impairment review if any events or changes in circumstances occur that might have a significant adverse effect on their value. If VMware determines that an other-than-temporary impairment has occurred, VMware writes down the investment to its fair value.

During the years ended February 2, 2018 and December 31, 2015 and the Transition Period, VMware determined that certain strategic investments were considered to be other-than-temporarily impaired and the impairment charges were not significant. During the year ended December 31, 2016, VMware recognized approximately \$14 million as an impairment charge for certain strategic investments that were considered to be other-than-temporarily impaired. Strategic investments are included in other assets on the consolidated balance sheets. The carrying value of VMware's strategic investments was \$146 million and \$139 million as of February 2, 2018 and February 3, 2017, respectively.

I. Derivatives and Hedging Activities

VMware conducts business on a global basis in multiple foreign currencies, subjecting the Company to foreign currency risk. To mitigate a portion of this risk, VMware utilizes hedging contracts as described below, which potentially expose the Company to credit risk to the extent that the counterparties may be unable to meet the terms of the agreements. VMware manages counterparty risk by seeking counterparties of high credit quality, by monitoring credit ratings and credit spreads of, and other relevant public information about its counterparties. VMware does not, and does not intend to, use derivative instruments for trading or speculative purposes.

Cash Flow Hedges

To mitigate its exposure to foreign currency fluctuations resulting from certain operating expenses denominated in certain foreign currencies, VMware enters into forward contracts that are designated as cash flow hedging instruments as the accounting criteria for such designation are met. Therefore, the effective portion of gains or losses resulting from changes in the fair value of these instruments is initially reported in accumulated other comprehensive loss on the consolidated balance sheets and is subsequently reclassified to the related operating expense line item on the consolidated statements of income (loss) in the same period that the underlying expenses are incurred. During the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period, the effective portion of gains or losses reclassified to the consolidated statements of income (loss) was not significant. Interest charges or "forward points" on VMware's forward contracts are excluded from the assessment of hedge effectiveness and are recorded in other income (expense), net on the consolidated statements of income (loss) as incurred.

These forward contracts have contractual maturities of twelve months or less, and as of February 2, 2018 and February 3, 2017, outstanding forward contracts had a total notional value of \$318 million and \$250 million, respectively. The notional value represents the gross amount of foreign currency that will be bought or sold upon maturity of the forward contract.

During the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period, all cash flow hedges were considered effective.

Forward Contracts Not Designated as Hedges

VMware has established a program that utilizes forward contracts to offset the foreign currency risk associated with net outstanding monetary asset and liability positions. These forward contracts are not designated as hedging instruments under applicable accounting guidance, and therefore all changes in the fair value of the forward contracts are reported in other income (expense), net on the consolidated statements of income (loss).

These forward contracts have a contractual maturity of one month, and as of February 2, 2018 and February 3, 2017, outstanding forward contracts had a total notional value of \$1,020 million and \$834 million, respectively. The notional value represents the gross amount of foreign currency that will be bought or sold upon maturity of the forward contract.

During the year ended February 2, 2018 and the Transition Period, VMware recognized losses of \$97 million and \$18 million, respectively, and gains of \$23 million and \$36 million during the years ended December 31, 2016 and December 31, 2015, respectively, related to the settlement of forward contracts. Gains and losses are recorded in other income (expense), net on the consolidated statements of income (loss).

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The combined gains and losses related to the settlement of forward contracts and the underlying foreign currency denominated assets and liabilities were not significant during the years ended February 2, 2018 and December 31, 2016 and the Transition Period. During the year ended December 31, 2015, combined gains and losses related to forward contracts and the underlying foreign currency denominated assets and liabilities resulted in a net loss of \$14 million. Net gains and losses are recorded in other income (expense), net on the consolidated statements of income (loss).

J. Property and Equipment, Net

Property and equipment, net, as of the periods presented consisted of the following (table in millions):

	February 2, 2018	February 3, 2017
Equipment and software	\$ 1,262	\$ 1,273
Buildings and improvements	824	814
Furniture and fixtures	101	101
Construction in progress	129	38
Total property and equipment	2,316	2,226
Accumulated depreciation	(1,242)	(1,184)
Total property and equipment, net	\$ 1,074	\$ 1,042

As of February 2, 2018, construction in progress primarily represented buildings and site improvements related to VMware's Palo Alto campus expansion that had not yet been placed into service.

Depreciation expense was \$195 million, \$215 million, \$190 million and \$18 million during the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period, respectively.

K. Commitments and Contingencies

Litigation

On August 10, 2015, the Company received a subpoena from the California Attorney General's office ("California AG"), following the Company's settlement with the Department of Justice and the General Services Administration during June 2015. In this matter, the California AG is investigating the accuracy of the Company's sales practices with departments and agencies within the State of California. The Company held an initial meeting with the California AG's representatives on November 5, 2015, and thereafter provided certain requested documents to the California AG. The Company did not receive any further communications from the California AG until the fall of 2017. Since then, the California AG and the Company have exchanged communications regarding the allegations at issue in the investigation and the Company has provided additional information requested by the California AG. In January 2018, the California AG advised the Company that it was ready to further discuss the matter. The Company is unable at this time to reasonably assess whether or to what extent it may be found liable and believes a loss is not considered probable and is not estimable.

On March 27, 2015, Phoenix Technologies ("Phoenix") filed a complaint against VMware in the U.S. District Court for the Northern District of California asserting claims for breach of contract and copyright infringement relating to a version of Phoenix's BIOS software that the Company licensed from Phoenix. The jury trial ran from May 30, 2017, through June 12, 2017, ending with a jury verdict on June 12, 2017, finding that VMware did not infringe on any of the four bases asserted by Phoenix. The Court subsequently entered judgment in VMware's favor, following which the parties filed various post-trial motions. On February 12, 2018, the Court denied Phoenix's post-trial motion seeking a judgment as a matter of law and a new trial, as well as the Company's motion for attorneys' fees pursuant to the federal copyright statute. Neither party filed a notice of appeal. As a result, the only remaining open issue is the Company's Bill of Costs, which has been fully briefed by the parties and awaits a ruling from the Court.

On March 4, 2015, Christoph Hellwig, a software developer who alleged that software code he wrote is used in a component of the Company's vSphere product, filed a lawsuit against VMware in the Hamburg Regional Court in Germany alleging copyright infringement for failing to comply with the terms of the open source General Public License v.2 ("GPL v.2"). On July 8, 2016, the German court issued a written decision dismissing Mr. Hellwig's lawsuit. Mr. Hellwig has appealed this decision and both parties have filed their initial opening appellate briefs. No hearing schedule has yet been set by the appellate court. The Company intends to continue vigorously defending itself against this lawsuit.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

While VMware believes that it has valid defenses against each of the above legal matters, given the unpredictable nature of legal proceedings, an unfavorable resolution of one or more legal proceedings, claims, or investigations could have a material adverse effect on VMware's consolidated financial statements.

VMware accrues for a liability when a determination has been made that a loss is both probable and the amount of the loss can be reasonably estimated. If only a range can be estimated and no amount within the range is a better estimate than any other amount, an accrual is recorded for the minimum amount in the range. Significant judgment is required in both the determination that the occurrence of a loss is probable and is reasonably estimable. In making such judgments, VMware considers the impact of negotiations, settlements, rulings, advice of legal counsel and other information and events pertaining to a particular matter. Legal costs are generally recognized as expense when incurred.

VMware is also subject to other legal, administrative and regulatory proceedings, claims, demands and investigations in the ordinary course of business or in connection with business mergers and acquisitions, including claims with respect to commercial, contracting and sales practices, product liability, intellectual property, employment, corporate and securities law, class action, whistleblower and other matters. From time to time, VMware also receives inquiries from and has discussions with government entities and stockholders on various matters. As of February 2, 2018, amounts accrued relating to these other matters arising as part of the ordinary course of business were considered not material. VMware does not believe that any liability from any reasonably foreseeable disposition of such claims and litigation, individually or in the aggregate, would have a material adverse effect on its consolidated financial statements.

Operating Leases and Other Contractual Commitments

VMware leases office facilities and equipment under various operating arrangements. Rent expense for the years ended February 2, 2018, December 31, 2016, and December 31, 2015 was \$116 million, \$112 million and \$105 million, respectively. Rent expense for the Transition Period was \$9 million. VMware's minimum future lease commitments and other contractual commitments at February 2, 2018 were as follows (table in millions):

	Future Lease Commitments ⁽¹⁾	Purchase Obligations	Other Contractual Commitments ⁽²⁾	Total
2019	\$ 87	\$ 45	\$ 4	\$ 136
2020	82	16	5	103
2021	59	10	3	72
2022	47	1	2	50
2023	40	1	3	44
Thereafter	545	—	7	552
Total	\$ 860	\$ 73	\$ 24	\$ 957

⁽¹⁾ Amounts in the table above exclude expected sublease income.

⁽²⁾ Consisting of various contractual agreements, which include commitments on the lease for VMware's Washington data center facility and asset retirement obligations.

The amount of the future lease commitments after fiscal 2023 is primarily for the ground leases on VMware's Palo Alto, California headquarter facilities, which expire in fiscal 2047. As several of VMware's operating leases are payable in foreign currencies, the operating lease payments may fluctuate in response to changes in the exchange rate between the U.S. dollar and the foreign currencies in which the commitments are payable.

Guarantees and Indemnification Obligations

VMware enters into agreements in the ordinary course of business with, among others, customers, distributors, resellers, system vendors and systems integrators. Most of these agreements require VMware to indemnify the other party against third-party claims alleging that a VMware product infringes or misappropriates a patent, copyright, trademark, trade secret, and/or other intellectual property right. Certain of these agreements require VMware to indemnify the other party against certain claims relating to property damage, personal injury, or the acts or omissions of VMware, its employees, agents, or representatives.

VMware has agreements with certain vendors, financial institutions, lessors and service providers pursuant to which VMware has agreed to indemnify the other party for specified matters, such as acts and omissions of VMware, its employees, agents, or representatives.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

VMware has procurement or license agreements with respect to technology that it has obtained the right to use in VMware's products and agreements. Under some of these agreements, VMware has agreed to indemnify the supplier for certain claims that may be brought against such party with respect to VMware's acts or omissions relating to the supplied products or technologies.

VMware has agreed to indemnify the directors and executive officers of VMware, to the extent legally permissible, against all liabilities reasonably incurred in connection with any action in which such individual may be involved by reason of such individual being or having been a director or executive officer. VMware's by-laws and charter also provide for indemnification of directors and officers of VMware and VMware subsidiaries to the extent legally permissible, against all liabilities reasonably incurred in connection with any action in which such individual may be involved by reason of such individual being or having been a director or executive officer. VMware also indemnifies certain employees who provide service with respect to employee benefits plans, including the members of the Administrative Committee of the VMware 401(k) Plan, and employees who serve as directors or officers of VMware's subsidiaries.

In connection with certain acquisitions, VMware has agreed to indemnify the former directors and officers of the acquired company in accordance with the acquired company's by-laws and charter in effect immediately prior to the acquisition or in accordance with indemnification or similar agreements entered into by the acquired company and such persons. VMware typically purchases a "tail" directors and officers insurance policy, which should enable VMware to recover a portion of any future indemnification obligations related to the former officers and directors of an acquired company.

It is not possible to determine the maximum potential amount under these indemnification agreements due to the Company's limited history with prior indemnification claims and the unique facts and circumstances involved in each particular situation. Historically, payments made by the Company under these agreements have not had a material effect on the Company's consolidated results of operations, financial position, or cash flows.

L. Accrued Expenses and Other

Accrued expenses and other as of the periods presented consisted of the following (table in millions):

	February 2, 2018	February 3, 2017
Accrued employee related expenses	\$ 634	\$ 443
Accrued partner liabilities	251	249
Other	356	195
Total	\$ 1,241	\$ 887

Accrued partner liabilities primarily relate to rebates and marketing development fund accruals for channel partners, system vendors and systems integrators. Accrued partner liabilities also include accruals for professional service arrangements for which VMware intends to leverage channel partners to directly fulfill the obligation to its customers.

M. Unearned Revenue

Unearned revenue as of the periods presented consisted of the following (table in millions):

	February 2, 2018	February 3, 2017
Unearned license revenue	\$ 523	\$ 484
Unearned software maintenance revenue	5,141	4,405
Unearned professional services revenue	586	451
Total unearned revenue	\$ 6,250	\$ 5,340

Unearned license revenue is generally recognized upon delivery of existing or future products or services, or is otherwise recognized ratably over the term of the arrangement. Future products include, in some cases, emerging products that are offered as part of product promotions where the purchaser of an existing product is entitled to receive the future product at no additional charge. To the extent the future product has not been delivered and VSOE of fair value cannot be established, revenue for the entire order is deferred until all product delivery obligations have been fulfilled. In the event the arrangement does not include professional services and if the customer is granted the right to receive unspecified future products or VSOE of fair value on the software maintenance element of the arrangement does not exist, then unearned license revenue may also be

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

recognized ratably. Unearned license revenue derived from commitments to future products that have not been delivered represents a significant portion of total unearned license revenue as of February 2, 2018 and February 3, 2017. Upon adoption of Topic 606, unearned license revenue is expected to substantially decline primarily due to the acceleration of revenue recognition for on-premise license sales that were deferred under current accounting guidance and due to customer prepayments on contracts with various cancellation rights.

Unearned software maintenance revenue is attributable to VMware's maintenance contracts and is generally recognized ratably over the contract period. The weighted-average remaining term as of February 2, 2018 was approximately two years. Unearned professional services revenue results primarily from prepaid professional services, including training, and is generally recognized as the services are delivered. The amount of unearned revenue derived from transactions denominated in a foreign currency is affected by fluctuations in the foreign currencies in which VMware invoices.

In connection with the disposition of vCloud Air, \$35 million of total unearned revenue, which included \$18 million of unearned license revenue, was transferred to OVH during the second quarter of fiscal 2018. Refer to Note D for further information.

N. Income Taxes

The domestic and foreign components of income (loss) before provisions (benefits) for income taxes were as follows (table in millions):

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Domestic	\$ 676	\$ 478	\$ 257	\$ (51)
Foreign	1,125	995	956	17
Total income (loss) before income tax	\$ 1,801	\$ 1,473	\$ 1,213	\$ (34)

VMware's provision (benefit) for income taxes consisted of the following (table in millions):

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Federal:				
Current	\$ 690	\$ 153	\$ 142	\$ 207
Deferred	373	5	(33)	(234)
	1,063	158	109	(27)
State:				
Current	6	14	9	16
Deferred	12	(5)	(1)	(21)
	18	9	8	(5)
Foreign:				
Current	151	128	96	6
Deferred	(1)	(8)	3	—
	150	120	99	6
Total provision (benefit) for income taxes	\$ 1,231	\$ 287	\$ 216	\$ (26)

The 2017 Tax Act introduces significant changes to U.S. income tax law including a mandatory one-time transition tax on accumulated earnings of foreign subsidiaries and a reduction of the U.S. statutory corporate income tax rate from 35% to 21%, effective January 1, 2018, which resulted in a blended rate of 34% during the year ended February 2, 2018. During December 2017, the SEC staff issued SAB 118, which allows recognition of provisional tax amounts during a measurement period not to extend beyond one year of the enactment date. Due to the timing of the enactment and the complexity involved in

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

applying the provisions of the 2017 Tax Act, the Company made reasonable estimates of the effects and recorded provisional amounts in its consolidated financial statements for the year ended February 2, 2018.

Federal income tax increased during the year ended February 2, 2018, primarily due to the 2017 Tax Act. As a result of the transition tax, VMware recorded a provisional estimate for income tax expense of approximately \$800 million that was calculated on a separate tax return basis. In addition, the Company recorded a provisional estimate for tax expense of approximately \$170 million related to the remeasurement of its deferred tax assets and liabilities, which resulted from the reduction of the U.S. statutory corporate income tax rate.

Provisional taxes relating to the effect of the tax law changes, including the estimated transition tax and the remeasurement of U.S. deferred tax assets and liabilities, among others, were recognized during the year ended February 2, 2018. As VMware completes its analysis of the 2017 Tax Act, collects and prepares necessary data, and interprets any additional guidance issued by the U.S. Treasury Department, the IRS, and other standard-setting bodies and relevant authorities, the Company may make adjustments to provisional amounts that it has recorded that may materially impact its provision for income taxes in the period in which the adjustments are made. VMware expects to complete its analysis within the measurement period permitted under SAB 118.

A reconciliation of VMware's income tax rate to the statutory federal tax rate is as follows:

	For the Year Ended			Transition Period
	February 2,	December 31,	December 31,	January 1 to
	2018	2016	2015	February 3,
				2017
Statutory federal tax rate ⁽¹⁾	34 %	35 %	35 %	35 %
State taxes, net of federal benefit	1 %	1 %	1 %	13 %
Tax rate differential for non-U.S. jurisdictions	(13)%	(16)%	(20)%	(1)%
U.S. tax credits	(4)%	(3)%	(2)%	— %
Excess tax benefits from stock-based compensation ⁽²⁾	(6)%	— %	— %	— %
Transition Tax due to 2017 Tax Act ⁽³⁾	44 %	— %	— %	— %
Rate Change due to 2017 Tax Act ⁽³⁾	10 %	— %	— %	— %
Permanent items	2 %	4 %	3 %	27 %
Other	— %	(2)%	1 %	2 %
Effective tax rate	68 %	19 %	18 %	76 %

⁽¹⁾ The 2017 Tax Act reduced the U.S. statutory corporate income tax rate from 35% to 21%, effective January 1, 2018, which resulted in a blended U.S. statutory corporate tax rate of 34% during the year ended February 2, 2018.

⁽²⁾ VMware adopted ASU No. 2016-09 during the first quarter of fiscal 2018. As a result, net excess tax benefits recognized in connection with stock-based awards are included in the income tax provision on the consolidated statements of income (loss). Prior to adopting the updated standard, such amounts were recognized in additional paid-in capital on the Company's consolidated balance sheets.

⁽³⁾ The effective tax rate was impacted by key components of the 2017 Tax Act, including the mandatory one-time transition tax on accumulated earnings of foreign subsidiaries, and the remeasurement of VMware's deferred tax assets and liabilities due to the reduction in the U.S. statutory corporate tax rate.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Deferred tax assets and liabilities are recognized for future tax consequences resulting from differences between the carrying amounts of assets and liabilities and their respective tax bases using enacted tax rates in effect for the year in which the differences are expected to be reversed. Significant deferred tax assets and liabilities consisted of the following (table in millions):

	February 2, 2018	February 3, 2017
Deferred tax assets:		
Unearned revenue	\$ 223	\$ 566
Accruals and other	48	63
Stock-based compensation	52	85
Tax credit and net operating loss carryforwards	254	169
Other assets, net	27	34
Intangible and other non-current assets	—	58
Basis difference on investment in business	13	20
Gross deferred tax assets	617	995
Valuation allowance	(200)	(161)
Total deferred tax assets	417	834
Deferred tax liabilities:		
Property, plant and equipment, net	(67)	(118)
Intangibles and other assets, net	(4)	—
Total deferred tax liabilities	(71)	(118)
Net deferred tax assets	\$ 346	\$ 716

The decrease in net deferred tax assets from February 3, 2017 to February 2, 2018 was driven in part by the remeasurement of the deferred tax balances resulting from the reduction in the U.S. statutory corporate income tax rate under the 2017 Tax Act. In addition, deferred tax assets related to unearned revenue were higher as of February 3, 2017, primarily due to the Dell Acquisition and VMware's change in fiscal year.

VMware has U.S. federal net operating loss carryforwards of \$195 million and \$90 million as of February 2, 2018 and February 3, 2017, respectively, from acquisitions made since 2007. These operating loss carryforwards expire at different periods through 2037. Portions of these carryforwards are subject to annual limitations. VMware expects to be able to fully utilize these net operating losses against future income. VMware also has state net operating loss carryforwards of \$187 million and \$116 million as of February 2, 2018 and February 3, 2017, respectively, resulting from acquisitions since 2007, expiring at different periods through 2037.

VMware has California research and development ("R&D") credit carryforwards for income tax purposes of \$168 million and \$110 million as of February 2, 2018 and February 3, 2017, respectively, that can be carried over indefinitely. VMware also has R&D credit carryforwards for Massachusetts and Georgia which were not material as of February 2, 2018 and February 3, 2017 and expire at different periods through 2032. In addition, VMware has foreign tax credit carryforwards of \$10 million as of February 2, 2018 which expire in 2029. There were no foreign tax credit carryforwards as of February 3, 2017. VMware has non-U.S. net operating losses of \$16 million as of February 3, 2017 resulting from certain foreign operations and non-U.S. acquisitions in 2014. The non-U.S. net operating losses as of February 2, 2018 were not material. These net operating losses have various carryforward periods, including certain portions that can be carried over indefinitely.

VMware determined that the realization of deferred tax assets relating to portions of the state net operating loss carryforwards, state R&D tax credits and capital losses did not meet the more-likely-than-not threshold. Accordingly, a valuation allowance of \$183 million and \$134 million was recorded as of February 2, 2018 and February 3, 2017, respectively. If, in the future, new evidence supports the realization of the deferred tax assets related to these items, the valuation allowance will be reversed and a tax benefit will be recorded accordingly.

VMware believes it is more-likely-than-not that the net deferred tax assets as of February 2, 2018 and February 3, 2017, will be realized in the foreseeable future as VMware believes that it will generate sufficient taxable income in future years. VMware's ability to generate sufficient taxable income in future years in appropriate tax jurisdictions will determine the amount.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

of net deferred tax asset balances to be realized in future periods. During the year ended February 2, 2018, the total change in the valuation allowance was \$39 million, which was primarily due to California R&D credits generated during the year ended February 2, 2018.

For the periods presented, VMware's rate of taxation in non-U.S. jurisdictions was lower than the U.S. tax rate. VMware's non-U.S. earnings are primarily earned by its subsidiaries organized in Ireland, where the statutory rate is 12.5%. Prior to the year ended February 2, 2018, the Company did not recognize a deferred tax liability related to undistributed foreign earnings of its subsidiaries because such earnings were considered to be indefinitely reinvested in its foreign operations, or were remitted substantially free of U.S. tax. Under the 2017 Tax Act, all foreign earnings are subject to U.S. taxation. As a result, the Company expects to repatriate a substantial portion of its foreign earnings over time, to the extent that the foreign earnings are not restricted by local laws or result in significant incremental costs associated with repatriating the foreign earnings. The Company has recorded a provisional estimate for the transition tax on these earnings. Further developments in non-U.S. tax jurisdictions and unfavorable changes in non-U.S. tax laws and regulations, such as foreign tax laws enacted in response to the 2017 Tax Act, could result in adverse changes to global taxation and materially affect VMware's financial position, results of operations, or annual effective tax rate.

Tax Sharing Agreement with Dell

On September 6, 2016, VMware entered into an amended tax sharing agreement with Dell, in connection with, and effective as of, the Dell Acquisition.

Although VMware's results are included in the Dell consolidated return for U.S. federal income tax purposes, VMware's income tax provision is calculated primarily as though VMware were a separate taxpayer. However, under certain circumstances, transactions between VMware and Dell are assessed using consolidated tax return rules.

VMware has made payments to Dell pursuant to the tax sharing agreement. The following table summarizes the payments made during the periods presented (table in millions):

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Payments from VMware to Dell, net	\$ 54	\$ 373	\$ 144	\$ —

Payments from VMware to Dell under the tax sharing agreement relate to VMware's portion of federal income taxes on Dell's consolidated tax return as well as state tax payments for combined states. The timing of the tax payments due to and from related parties is governed by the tax sharing agreement. The amounts that VMware pays to Dell for its portion of federal income taxes on Dell's consolidated tax return differ from the amounts VMware would owe on a separate tax return basis and the difference is recognized as a component of additional paid-in capital, generally in the period in which the consolidated return is filed. The difference between the amount of tax calculated on a separate return basis and the amount of tax calculated pursuant to the tax sharing agreement was not significant during the year ended February 2, 2018 and during the Transition Period. During the years ended December 31, 2016 and December 31, 2015, the difference between the amount of tax calculated on a separate return basis and the amount of tax calculated pursuant to the tax sharing agreement was recorded in additional paid-in capital as an increase of \$15 million and \$13 million, respectively.

As a result of the activity under the tax sharing agreement with Dell, amounts due to and from Dell, net as of the periods presented consisted of the following (table in millions):

	February 2, 2018	February 3, 2017
Income tax due to Dell	\$ 781	\$ 21

Income tax due to Dell as of February 2, 2018, primarily related to VMware's estimated tax obligation resulting from the mandatory one-time transition tax on accumulated earnings of foreign subsidiaries under the 2017 Tax Act. The 2017 Tax Act includes a deferral election for an eight-year installment payment method on transition tax obligations. The Company currently expects to pay its transition tax obligation over a period of eight years.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Unrecognized Tax Benefits

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits, excluding interest and penalties associated with unrecognized tax benefits, is as follows (table in millions):

	For the Year Ended			Transition Period
	February 2,	December 31,	December 31,	January 1 to
	2018	2016	2015	February 3,
				2017
Balance, beginning of the year/period	\$ 263	\$ 245	\$ 190	\$ 260
Tax positions related to current year/period:				
Additions	63	45	41	3
Tax positions related to prior years/period:				
Additions	1	9	54	—
Reductions	(2)	(8)	(14)	(1)
Settlements	(9)	(16)	(12)	—
Reductions resulting from a lapse of the statute of limitations	(24)	(14)	(11)	—
Foreign currency effects	10	(1)	(3)	1
Balance, end of the year/period	\$ 302	\$ 260	\$ 245	\$ 263

Of the net unrecognized tax benefits, including interest and penalties, of \$208 million and \$281 million as of February 2, 2018 and February 3, 2017, respectively, approximately \$185 million and \$263 million, respectively, would, if recognized, benefit VMware's annual effective income tax rate. The \$208 million and \$281 million of net unrecognized tax benefits are included in income tax payable on the consolidated balance sheets as of February 2, 2018 and February 3, 2017, respectively. VMware includes interest expense and penalties related to income tax matters in the income tax provision. VMware had accrued \$41 million and \$45 million of interest and penalties associated with unrecognized tax benefits as of February 2, 2018 and of February 3, 2017, respectively. Income tax expense included interest and penalties associated with uncertain tax positions, which were not significant during the year ended February 2, 2018 and the Transition Period, and were \$10 million and \$13 million during the years ended December 31, 2016 and December 31, 2015, respectively.

The Dell-owned EMC consolidated group is routinely under audit by the Internal Revenue Service ("IRS"). All U.S. federal income tax matters have been concluded for years through 2011, except for any matters under appeal. In addition, VMware is under corporate income tax audits in various states and non-U.S. jurisdictions. Consistent with the Company's historical practices under the tax sharing agreement with EMC, when VMware becomes subject to federal tax audits as a member of Dell's consolidated group, the tax sharing agreement provides that Dell has authority to control the audit and represent Dell's and VMware's interests to the IRS.

Open tax years subject to examinations for larger non-U.S. jurisdictions vary beginning in 2008. Open tax years for Ireland, the largest non-U.S. jurisdiction, begin in 2010. Audit outcomes and the timing of audit settlements are subject to significant uncertainty. When considering the outcomes and the timing of tax examinations, the expiration of statutes of limitations for specific jurisdictions, or the timing and result of ruling requests from taxing authorities, it is reasonably possible that total net unrecognized tax benefits could be potentially reduced by approximately \$23 million within the next 12 months.

O. Stockholders' Equity
VMware Class B Common Stock Conversion Rights

Each share of Class B common stock is convertible into one share of Class A common stock. If VMware's Class B common stock is distributed to security holders of Dell in a qualified distribution, the Class B shares will no longer be convertible into shares of Class A common stock unless a stockholder vote is obtained after certain conditions are satisfied. Prior to any such distribution, all Class B shares automatically convert into shares of Class A common stock if Dell transfers such shares to a third party that is not a successor or a Dell subsidiary or at such time as the number of shares of common stock owned by Dell or its successor falls below 20% of the outstanding shares of VMware's common stock. As of February 2, 2018, 300.0 million shares of Class A common stock were reserved for conversion.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

VMware Equity Plan

In June 2007, VMware adopted its 2007 Equity and Incentive Plan (the “2007 Plan”). As of February 2, 2018, the number of authorized shares under the 2007 Plan was 126.1 million. The number of shares underlying outstanding equity awards that VMware assumes in the course of business acquisitions are also added to the 2007 Plan reserve on an as-converted basis. VMware has assumed 5.6 million shares, which accordingly have been added to authorized shares under the 2007 Plan reserve.

Awards under the 2007 Plan may be in the form of stock-based awards, such as restricted stock units, or stock options. VMware’s Compensation and Corporate Governance Committee determines the vesting schedule for all equity awards. Generally, restricted stock grants made under the 2007 Plan have a three - year to four -year period over which they vest and vest 25% the first year and semi-annually thereafter. The per share exercise price for a stock option awarded under the 2007 Plan shall not be less than 100% of the per share fair market value of VMware Class A common stock on the date of grant. Most options granted under the 2007 Plan vest 25% after the first year and monthly thereafter over the following three years and expire between six and seven years from the date of grant. VMware utilizes both authorized and unissued shares to satisfy all shares issued under the 2007 Plan. As of February 2, 2018, there were an aggregate of 15.8 million shares of common stock available for issuance pursuant to future grants under the 2007 Plan.

VMware Stock Repurchases

VMware purchases stock from time to time in open market transactions, subject to market conditions. The timing of any repurchases and the actual number of shares repurchased will depend on a variety of factors, including VMware’s stock price, cash requirements for operations and business combinations, corporate, legal and regulatory requirements and other market and economic conditions. VMware is not obligated to purchase any shares under its stock repurchase programs. Purchases can be discontinued at any time VMware believes additional purchases are not warranted. From time to time, VMware also purchases stock in private transactions, such as those with Dell. All shares repurchased under VMware’s stock repurchase programs are retired.

During January 2017, VMware’s board of directors authorized the repurchase of up to \$1,200 million of VMware’s Class A common stock through the end of fiscal 2018. During August 2017, VMware’s board of directors authorized the repurchase of up to an additional \$1,000 million of Class A common stock through August 31, 2018. As of February 2, 2018, the cumulative authorized amount remaining for stock repurchases was \$876 million.

The following table summarizes stock repurchase authorizations approved by VMware’s board of directors, which were open or completed during the years ended February 2, 2018, December 31, 2016 and December 31, 2015 (amounts in table in millions):

Authorization Date	Amount Authorized	Expiration Date	Status
August 14, 2017	\$1,000	August 31, 2018	Open
January 26, 2017	1,200	February 2, 2018	Completed in fiscal 2018
April 18, 2016	1,200	December 31, 2016	Completed in fiscal 2016
January 27, 2015	1,000	December 31, 2017	Completed in fiscal 2016
August 6, 2014	1,000	December 31, 2016	Completed in fiscal 2015

The following table summarizes stock repurchase activity, including shares purchased from Dell, during the periods presented (aggregate purchase price in millions, shares in thousands):

	For the Year Ended		
	February 2, 2018	December 31, 2016	December 31, 2015
Aggregate purchase price ⁽¹⁾	\$ 1,449	\$ 1,575	\$ 1,125
Class A common shares repurchased	13,977	21,281	13,495
Weighted-average price per share	\$ 103.66	\$ 73.99	\$ 83.36

⁽¹⁾ The aggregate purchase price of repurchased shares is classified as a reduction to additional paid-in capital.

VMware did not repurchase any shares of its Class A common stock during the Transition Period.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

VMware Restricted Stock

VMware's restricted stock primarily consists of restricted stock unit ("RSU") awards, which have been granted to employees. The value of an RSU grant is based on VMware's stock price on the date of grant. The shares underlying the RSU awards are not issued until the RSUs vest. Upon vesting, each RSU converts into one share of VMware Class A common stock.

VMware's restricted stock also includes performance stock unit ("PSU") awards, which have been granted to certain VMware executives and employees. The PSU awards include performance conditions and, in certain cases, a time-based or market-based vesting component. Upon vesting, PSU awards convert into VMware's Class A common stock at various ratios ranging from 0.5 to 2.0 shares per PSU, depending upon the degree of achievement of the performance or market-based target designated by each award. If minimum performance thresholds are not achieved, then no shares are issued.

The following table summarizes restricted stock activity since January 1, 2015 (units in thousands):

	Number of Units	Weighted-Average Grant Date Fair Value (per unit)
Outstanding, January 1, 2015	12,585	\$ 88.88
Granted	12,787	72.42
Vested	(4,855)	90.72
Forfeited	(1,824)	87.39
Outstanding, December 31, 2015	18,693	77.29
Granted	12,742	60.90
Vested	(7,188)	77.18
Forfeited	(3,381)	75.93
Outstanding, December 31, 2016	20,866	67.54
Vested	(256)	77.07
Forfeited	(159)	68.11
Outstanding, February 3, 2017	20,451	67.41
Granted	7,838	93.84
Vested	(9,070)	67.89
Forfeited	(1,859)	72.68
Outstanding, February 2, 2018	17,360	78.62

As of February 2, 2018, the 17.4 million units outstanding included 16.7 million of RSUs and 0.7 million of PSUs. The above table includes RSUs issued for outstanding unvested RSUs in connection with business combinations.

Restricted stock that is expected to vest as of February 2, 2018 was as follows (units in thousands, aggregate intrinsic value in millions):

	Number of Units	Weighted Average Remaining Term (in years)	Aggregate Intrinsic Value ⁽¹⁾
Expected to vest	15,115	2.51	\$ 1,855

⁽¹⁾The aggregate intrinsic value represents the total pre-tax intrinsic values based on VMware's closing stock price of \$122.72 as of February 2, 2018, which would have been received by the RSU holders had the RSUs been issued as of February 2, 2018.

The aggregate vesting date fair value of VMware restricted stock that vested during the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period was \$946 million, \$468 million, \$379 million and \$21 million, respectively. As of February 2, 2018, restricted stock representing 17.4 million shares of VMware's Class A common stock were outstanding, with an aggregate intrinsic value of \$2,130 million based on VMware's closing stock price as of February 2, 2018.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

VMware Employee Stock Purchase Plan

In June 2007, VMware adopted its 2007 Employee Stock Purchase Plan (the “ESPP”), which is intended to be qualified under Section 423 of the Internal Revenue Code. As of February 2, 2018, the number of authorized shares under the ESPP was a total of 23.3 million shares. Under the ESPP, eligible VMware employees are granted options to purchase shares at the lower of 85% of the fair market value of the stock at the time of grant or 85% of the fair market value at the time of exercise. The option period is generally twelve months and includes two embedded six-month option periods. Options are exercised at the end of each embedded option period. If the fair market value of the stock is lower on the first day of the second embedded option period than it was at the time of grant, then the twelve-month option period expires and each enrolled participant is granted a new twelve-month option. As of February 2, 2018, 8.7 million shares of VMware Class A common stock were available for issuance under the ESPP.

The following table summarizes ESPP activity during the periods presented (cash proceeds in millions, shares in thousands):

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Cash proceeds	\$ 65	\$ 103	\$ 98	\$ 60
Class A common shares purchased	903	2,657	1,495	1,468
Weighted-average price per share	\$ 72.40	\$ 38.78	\$ 65.54	\$ 40.65

As of February 2, 2018, \$80 million of ESPP withholdings were recorded as a liability in accrued expenses and other on the consolidated balance sheets for the purchase that occurred on February 28, 2018.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

VMware Stock Options

The following table summarizes stock option activity since January 1, 2015 (shares in thousands):

	VMware Stock Options		EMC Stock Options	
	Number of Shares	Weighted-Average Exercise Price (per share)	Number of Shares	Weighted-Average Exercise Price (per share)
Outstanding, January 1, 2015	5,869	\$ 50.54	1,271	\$ 16.08
Options relating to employees transferred (to) from EMC	—	—	8	20.23
Granted	21	54.23	—	—
Forfeited	(322)	70.42	(1)	19.37
Expired	—	—	(14)	14.21
Exercised	(2,404)	29.44	(201)	13.96
Outstanding, December 31, 2015	3,164	64.56	1,063	16.54
Options relating to employees transferred (to) from EMC	—	—	19	15.90
Granted	66	6.53	—	—
Forfeited	(259)	77.42	—	—
Expired	(476)	80.52	(17)	14.44
Exercised	(418)	13.41	(1,065)	16.56
Outstanding, December 31, 2016	2,077	67.75	—	—
Forfeited	(9)	79.45	—	—
Exercised	(77)	23.72	—	—
Outstanding, February 3, 2017	1,991	69.38	—	—
Granted	745	13.79	—	—
Forfeited	(36)	55.44	—	—
Expired	(3)	93.87	—	—
Exercised	(1,050)	53.50	—	—
Outstanding, February 2, 2018	1,647	54.63	—	—

The above table includes stock options granted in conjunction with unvested stock options assumed in business combinations. As a result, the weighted-average exercise price per share may vary from the VMware stock price at time of grant.

The stock options outstanding as of February 2, 2018 had an aggregate intrinsic value of \$112 million based on VMware's closing stock price as of February 2, 2018.

Options outstanding that are exercisable and that have vested and are expected to vest as of February 2, 2018 were as follows (outstanding options in thousands, aggregate intrinsic value in millions):

	VMware Stock Options			
	Outstanding Options	Weighted Average Exercise Price	Weighted Average Remaining Term (in years)	Aggregate Intrinsic Value ⁽¹⁾
Exercisable	1,020	\$ 73.60	3.34	\$ 50
Vested and expected to vest	1,644	54.56	5.11	112

⁽¹⁾The aggregate intrinsic values represent the total pre-tax intrinsic values based on VMware's closing stock price of \$122.72 as of February 2, 2018, which would have been received by the option holders had all in-the-money options been exercised as of that date.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The total fair value of VMware stock options that vested during the years ended February 2, 2018 , December 31, 2016 and December 31, 2015 was \$32 million , \$29 million and \$60 million , respectively, and was not material during the Transition Period .

The options exercised during the years ended February 2, 2018 , December 31, 2016 and December 31, 2015 had a pre-tax intrinsic value of \$62 million , \$22 million and \$136 million , respectively, and was not material during the Transition Period .

The pre-tax intrinsic value of EMC stock options held by VMware employees that were exercised during the years ended December 31, 2016 and December 31, 2015 was \$13 million and \$3 million , respectively.

VMware Shares Repurchased for Tax Withholdings

During the years ended February 2, 2018 , December 31, 2016 and December 31, 2015 and the Transition Period , VMware repurchased and retired or withheld 3.3 million , 2.6 million , 2.6 million and 0.1 million shares, respectively, of Class A common stock, for \$348 million , \$167 million , \$173 million and \$7 million , respectively, to cover tax withholding obligations in connection with such equity awards. These amounts may differ from the amounts of cash remitted for tax withholding obligations on the consolidated statements of cash flows due to the timing of payments. Pursuant to the respective award agreements, these shares were withheld in conjunction with the net share settlement upon the vesting of restricted stock and restricted stock units (including PSUs) during the period. The value of the withheld shares, including restricted stock units, was classified as a reduction to additional paid-in capital.

Stock-Based Compensation

The following table summarizes the components of total stock-based compensation included in VMware's consolidated statements of income (loss) during the periods presented (table in millions):

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
Cost of license revenue	\$ 2	\$ 2	\$ 2	\$ —
Cost of services revenue	50	52	44	5
Research and development	355	305	226	31
Sales and marketing	197	195	168	19
General and administrative	79	82	64	7
Stock-based compensation	683	636	504	62
Income tax benefit	(232)	(183)	(144)	(19)
Total stock-based compensation, net of tax	\$ 451	\$ 453	\$ 360	\$ 43

As of February 2, 2018 , the total unrecognized compensation cost for stock options and restricted stock was \$1,052 million and will be recognized through fiscal 2022 with a weighted-average remaining period of 1.5 years . Stock-based compensation related to VMware equity awards held by VMware employees is recognized on VMware's consolidated statements of income (loss) over the awards' requisite service periods.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Fair Value of VMware Options

The fair value of each option to acquire VMware Class A common stock granted during the periods presented was estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted-average assumptions:

	For the Year Ended		
	February 2, 2018	December 31, 2016	December 31, 2015
<i>VMware Stock Options</i>			
Dividend yield	None	None	None
Expected volatility	29.1%	31.9%	32.0%
Risk-free interest rate	1.7%	0.9%	1.1%
Expected term (in years)	3.3	3.1	3.3
Weighted-average fair value at grant date	\$ 83.62	\$ 49.64	\$ 27.16

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
<i>VMware Employee Stock Purchase Plan</i>				
Dividend yield	None	None	None	None
Expected volatility	22.6%	38.3%	30.1%	25.0%
Risk-free interest rate	1.2%	0.5%	0.1%	0.8%
Expected term (in years)	0.9	0.7	0.5	0.8
Weighted-average fair value at grant date	\$ 21.93	\$ 13.57	\$ 20.59	\$ 21.18

There were no options to acquire VMware Class A common stock granted during the Transition Period .

The weighted-average grant date fair value of VMware stock options can fluctuate from period to period primarily due to higher valued options assumed through business combinations with exercise prices lower than the fair market value of VMware's stock on the date of grant.

For equity awards granted during the years ended February 2, 2018 , December 31, 2016 and December 31, 2015 , volatility was based on an analysis of historical stock prices and implied volatilities of VMware's Class A common stock. The expected term is based on historical exercise patterns and post-vesting termination behavior, the term of the option period for grants made under the ESPP, or the weighted-average remaining term for options assumed in acquisitions. VMware's expected dividend yield input was zero as it has not historically paid, nor expects in the future to pay, cash dividends on its common stock. The risk-free interest rate was based on a U.S. Treasury instrument whose term is consistent with the expected term of the stock options.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Accumulated Other Comprehensive Loss

The changes in components of accumulated other comprehensive loss during the periods presented were as follows (tables in millions):

	Unrealized Gain (Loss) on Available-for-Sale Securities	Unrealized Gain (Loss) on Forward Contracts	Total
Balance, January 1, 2016	\$ (7)	\$ (1)	\$ (8)
Unrealized gains (losses), net of tax (benefit) of (\$4), \$—, and (\$3)	(6)	1	(5)
Amounts reclassified from accumulated other comprehensive income (loss) to the consolidated statements of income (loss), net of tax benefit of \$3, \$—, and \$3	5	(1)	4
Other comprehensive loss, net	(1)	—	(1)
Balance, December 31, 2016	(8)	(1)	(9)
Unrealized gains, net of tax provision of \$1, \$— and \$1	2	3	5
Balance, February 3, 2017	(6)	2	(4)
Unrealized gains (losses), net of tax (benefit) of (\$5), \$—, and (\$5)	(12)	1	(11)
Amounts reclassified from accumulated other comprehensive income (loss) to the consolidated statements of income (loss), net of tax benefit of \$2, \$— and \$2	3	(3)	—
Other comprehensive loss, net	(9)	(2)	(11)
Balance, February 2, 2018	\$ (15)	\$ —	\$ (15)

Unrealized gains and losses on VMware's available-for-sale securities are reclassified to investment income on the consolidated statements of income (loss) in the period that such gains and losses are realized.

The effective portion of gains or losses resulting from changes in the fair value of forward contracts designated as cash flow hedging instruments is reclassified to its related operating expense line item on the consolidated statements of income (loss) in the same period that the underlying expenses are incurred. The amounts recorded to their related operating expense functional line items on the consolidated statements of income (loss) were not significant to the individual functional line items during the periods presented.

P. Segment Information

VMware operates in one reportable operating segment, thus all required financial segment information is included in the consolidated financial statements. Operating segments are defined as components of an enterprise for which separate financial information is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and assessing performance. VMware's chief operating decision maker allocates resources and assesses performance based upon discrete financial information at the consolidated level.

Revenue by geographic area during the periods presented was as follows (table in millions):

	For the Year Ended			Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	January 1 to February 3, 2017
United States	\$ 3,911	\$ 3,588	\$ 3,311	\$ 248
International	4,011	3,505	3,260	248
Total	\$ 7,922	\$ 7,093	\$ 6,571	\$ 496

Revenue by geographic area is based on the ship-to addresses of VMware's customers. No individual country other than the U.S. accounted for 10% or more of revenue during the years ended February 2, 2018, December 31, 2016 and December 31, 2015 and the Transition Period.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Long-lived assets by geographic area, which primarily include property and equipment, net, as of the periods presented were as follows (table in millions):

	February 2, 2018	February 3, 2017
United States	\$ 784	\$ 777
International	117	131
Total	\$ 901	\$ 908

No individual country other than the U.S. accounted for 10% or more of these assets as of February 2, 2018 and February 3, 2017.

VMware's product and service solutions are organized into three main product groups:

- Software-Defined Data Center
- Hybrid Cloud Computing
- End-User Computing

VMware develops and markets product and service offerings within each of these three product groups. Additionally, synergies are leveraged across these three product areas. VMware's products and service solutions from each of its product groups may also be bundled as part of an enterprise agreement arrangement or packaged together and sold as a suite. Accordingly, it is not practicable to determine revenue by each of the three product groups described above.

Q. Transition Period

Comparable Financial Information

In conjunction with VMware's change in fiscal year end, the Company had a Transition Period of 34 days that began on January 1, 2017 and ended on February 3, 2017. The most comparable prior-year period, the one month ended January 31, 2016, had a duration of 31 days.

The following table presents certain financial information during the periods presented (table in millions, except per share amounts and shares in thousands):

	Transition Period January 1 to February 3, 2017	Comparable Period January 1 to January 31, 2016 (Unaudited)
Total revenue	\$ 496	\$ 470
Operating income (loss)	(41)	22
Income tax provision (benefit)	(26)	4
Net income (loss)	(8)	22
Net income (loss) per weighted-average share, basic for Classes A and B	\$ (0.02)	\$ 0.05
Net income (loss) per weighted-average share, diluted for Classes A and B	\$ (0.02)	\$ 0.05
Weighted-average shares, basic for Classes A and B	408,625	422,067
Weighted-average shares, diluted for Classes A and B ⁽¹⁾	408,625	423,092

⁽¹⁾ During the Transition Period, VMware incurred a net loss. As a result, all potentially dilutive securities were anti-dilutive and excluded from the computation of diluted net loss per share.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

R. Selected Quarterly Financial Data (unaudited)

Quarterly financial data for fiscal 2018 and 2016 were as follows (tables in millions, except per share amounts):

Fiscal 2018	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Revenue	\$ 1,736	\$ 1,900	\$ 1,976	\$ 2,309
Net income (loss)	232	334	443	(440)
Net income (loss) per share, basic	\$ 0.57	\$ 0.82	\$ 1.09	\$ (1.09)
Net income (loss) per share, diluted	\$ 0.56	\$ 0.81	\$ 1.07	\$ (1.09)

Fiscal 2016	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Revenue	\$ 1,589	\$ 1,693	\$ 1,778	\$ 2,032
Net income	161	265	319	441
Net income per share, basic	\$ 0.38	\$ 0.62	\$ 0.76	\$ 1.07
Net income per share, diluted	\$ 0.38	\$ 0.62	\$ 0.75	\$ 1.04

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

None.

ITEM 9A. CONTROLS AND PROCEDURES
Evaluation of Disclosure Controls and Procedures

We carried out an evaluation required by the Securities Exchange Act of 1934, amended (the “Exchange Act”), under the supervision and with the participation of our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rule 13a-15(e) of the Exchange Act, as of the end of the period covered by this report. Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms and to provide reasonable assurance that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosures.

Management’s Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) of the Exchange Act. Management has assessed the effectiveness of our internal control over financial reporting as of February 2, 2018 based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. As a result of this assessment, management concluded that, as of February 2, 2018, our internal control over financial reporting was effective in providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. The effectiveness of our internal control over financial reporting as of February 2, 2018 has been audited by PricewaterhouseCoopers, LLP, an independent registered public accounting firm, as stated in their report which appears in Item 8 of this Annual Report on Form 10-K.

Changes in Internal Controls Over Financial Reporting

There were no changes in our internal control over financial reporting during the most recent fiscal quarter ended February 2, 2018 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Controls

Our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives as specified above. Our management, including our principal executive officer and

principal financial officer, conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Management does not expect, however, that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and fraud. Any control system, no matter how well designed and operated, is based upon certain assumptions and can provide only reasonable, not absolute, assurance that its objectives will be met. Further, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within the Company have been detected.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

We will furnish to the Securities and Exchange Commission a definitive Proxy Statement no later than 120 days after the close of the fiscal year ended February 2, 2018. The information required by this item is incorporated herein by reference to the Proxy Statement. Also see “Executive Officers of the Registrant” in Part I of this Annual Report on Form 10-K.

We have a code of ethics that applies to all of our employees, including our executive officers. Our Business Conduct Guidelines (available on our website) satisfy the requirements set forth in Item 406 of Regulation S-K and apply to all relevant persons set forth therein. We intend to disclose on our website at www.vmware.com amendments to, and, if applicable, waivers of, our code of ethics.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference to the section of the Company’s Proxy Statement entitled “Compensation of Executive Officers.”

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

The information required by this item is incorporated herein by reference to the section of the Company’s Proxy Statement entitled “Security Ownership of Certain Beneficial Owners and Management.”

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

The information required by this item is incorporated herein by reference to the section of the Company’s Proxy Statement entitled “Our Board of Directors and Nominees” and “Transactions with Related Persons.”

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated herein by reference to the section of the Company’s Proxy Statement entitled “Ratification of Selection of Independent Auditor.”

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULE

The following documents are filed as a part of this Annual Report on Form 10-K:

1. *Financial Statements* : The information relating to our financial statements, and Report of Independent Registered Public Accounting Firm required by this Item is filed as part of this Annual Report on Form 10-K in Item 8, entitled “Financial Statements and Supplementary Data.”
2. *Financial Statement Schedule* : Schedule II Valuation and Qualifying Accounts is filed as part of this Annual Report on Form 10-K and should be read in conjunction with the Consolidated Financial Statements and Notes thereto.
3. *Exhibits*: The exhibits listed below are filed or incorporated by reference as part of this Annual Report on Form 10-K.

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
3.1	Amended and Restated Certificate of Incorporation	10-Q	001-33622	3.1	6/9/17
3.2	Amended and Restated Bylaws	8-K	001-33622	3.1	2/23/17
4.1	Form of Specimen Common Stock Certificate	S-1/A-4	333-142368	4.1	7/27/07
4.2	Indenture by and between VMware and The Bank of New York Mellon Trust Company, N.A., as trustee, dated August 21, 2017	8-K	001-33622	4.1	8/21/17
4.3	First Supplemental Indenture by and between VMware and The Bank of New York Mellon Trust Company, N.A., as trustee, dated August 21, 2017	8-K	001-33622	4.2	8/21/17
4.4	Second Supplemental Indenture by and between VMware and The Bank of New York Mellon Trust Company, N.A., as trustee, dated August 21, 2017	8-K	001-33622	4.3	8/21/17
4.5	Third Supplemental Indenture by and between VMware and The Bank of New York Mellon Trust Company, N.A., as trustee, dated August 21, 2017	8-K	001-33622	4.4	8/21/17
10.1*	Amended and Restated Master Transaction Agreement between VMware, Inc., Dell Technologies Inc. and EMC Corporation dated January 9, 2018				
10.2*	Amended and Restated Administrative Services Agreement between VMware, Inc., Dell Technologies Inc. and EMC Corporation dated January 9, 2018				
10.3	Amended and Restated Tax Sharing Agreement between VMware, Inc. and Dell Technologies Inc. effective as of September 6, 2016	10-Q	001-33622	10.32	11/7/16
10.4	Form of Intellectual Property Agreement between VMware, Inc. and EMC Corporation	S-1/A-1	333-142368	10.4	6/11/07
10.5	Amended and Restated Real Estate License Agreement between VMware, Inc. and EMC Corporation dated September 21, 2015	10-Q	001-33622	10.5	11/9/15
10.6+	2007 Equity and Incentive Plan, as amended and restated June 8, 2017	10-Q	001-33622	10.6	6/9/17
10.7+	Form of Indemnification Agreement for VMware, Inc. Directors and Executive Officers, as approved April 5, 2017	10-Q	001-33622	10.7	6/9/17
10.8*	Amended and Restated Insurance Matters Agreement between VMware, Inc., Dell Technologies Inc. and EMC Corporation dated January 9, 2018				
10.9+	Form of Stock Option Agreement, as amended May 13, 2015	10-Q	001-33622	10.9	8/5/15
10.10+	Form of Restricted Stock Unit Agreement, as amended June 2017	10-Q	001-33622	10.10	9/7/17

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.11+	2007 Employee Stock Purchase Plan, as amended and restated June 8, 2017	10-Q	001-33622	10.11	6/9/17
10.12+	Executive Bonus Program, as amended and restated February 10, 2017	10-Q	001-33622	10.12	6/9/17
10.13	Agreement of Purchase and Sale between Roche Palo Alto LLC and VMware, Inc. dated March 16, 2011	10-Q	001-33622	10.24	8/3/11
10.14	Amended and Restated Ground Lease between VMware, Inc. and the Board of Trustees of the Leland Stanford Junior University dated June 13, 2011 (3431 Hillview Campus)	10-Q	001-33622	10.25	8/3/11
10.15	Ground Lease between 3401 Hillview LLC. and the Board of Trustees of the Leland Stanford Junior University dated as of February 2, 2006	10-Q	001-33622	10.26	8/3/11
10.16+	Form of Performance Stock Unit Agreement, as amended June 2017	10-Q	001-33622	10.16	9/7/17
10.17+	Non-Qualified Deferred Compensation Plan, effective as of January 1, 2014	10-K	001-33622	10.26	2/25/14
10.18+	Non-Qualified Deferred Compensation Plan Adoption Agreement, effective as of January 1, 2014	10-K	001-33622	10.27	2/25/14
10.19+	Letter Agreement between VMware, Inc. and Sanjay Poonen effective as of October 26, 2016	10-K	001-33622	10.19	2/24/17
10.20	Third Amendment to Ground Lease by and between the Board of Trustees of the Leland Stanford Junior University and 3401 Hillview LLC dated as of January 1, 2014	10-Q	001-33622	10.30	5/1/14
10.21	Promissory Note for \$270 million due and payable on December 1, 2022, issued to EMC Corporation dated January 31, 2014	10-Q	001-33622	10.34	5/1/14
10.22+	Change in Control Retention Plan, adopted February 25, 2015	10-K	001-33622	10.28	2/26/15
10.23+	Letter Agreement between VMware, Inc. and Maurizio Carli effective as of April 1, 2016	10-Q	001-33622	10.30	8/8/16
10.24+	Form of Restricted Stock Unit Agreement for U.K. Participants, as amended June 2017	10-Q	001-33622	10.30	9/7/17
10.25+	Letter Agreement between VMware, Inc. and Raghu Raghuram effective as of October 26, 2016	10-K	001-33622	10.32	2/24/17
10.26+	Letter Agreement between VMware, Inc. and Rajiv Ramaswami effective as of October 26, 2016	10-K	001-33622	10.33	2/24/17
10.27	Stock Purchase Agreement, dated as of March 29, 2017, by and among Dell Technologies Inc., EMC Equity Assets LLC and VMware, Inc.	8-K	001-33622	10.1	3/30/17
10.28+	Form of Performance Stock Unit Agreement for Non-U.S. Participants	10-Q	001-33622	10.34	9/7/17
10.29	Purchase Commitment Supplement No. 2, dated as of August 23, 2017, by and among Dell Technologies Inc., EMC Equity Assets LLC and VMware, Inc.	8-K	001-33622	99.1	8/24/17
12*	Computation of Ratio of Earnings (Losses) to Fixed Charges				
21*	List of subsidiaries				
23*	Consent of PricewaterhouseCoopers LLP				

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
31.1*	Certification of Principal Executive Officer required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				
31.2*	Certification of Principal Financial Officer required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 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 Extension Schema				
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase				
101.DEF*	XBRL Taxonomy Extension Definition Linkbase				
101.LAB*	XBRL Taxonomy Extension Label Linkbase				
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase				

+ Indicates management contract or compensatory plan or arrangement

* Filed herewith

† Furnished herewith

ITEM 16. FORM 10-K SUMMARY

Not applicable.

SIGNATURES

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

VMWARE, INC.

Dated: March 29, 2018

By: /s/ Patrick Gelsinger

Patrick Gelsinger
Chief Executive Officer

Dated: March 29, 2018

By: /s/ Kevan Kryslar

Kevan Kryslar
Senior Vice President, Chief Accounting Officer
(Principal Accounting Officer)

POWER OF ATTORNEY

Each person whose individual signature appears below hereby authorizes and appoints Patrick Gelsinger, Amy Olli and Zane Rowe, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file 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, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the Registrant in the capacities indicated and on the dates indicated.

<u>Date</u>	<u>Signature</u>	<u>Title</u>
March 29, 2018	<u>/s/ Patrick Gelsinger</u> Patrick Gelsinger	Chief Executive Officer and Director (Principal Executive Officer)
March 29, 2018	<u>/s/ Zane Rowe</u> Zane Rowe	Chief Financial Officer and Executive Vice President (Principal Financial Officer)
March 29, 2018	<u>/s/ Michael Dell</u> Michael Dell	Chairman
March 29, 2018	<u>/s/ Anthony Bates</u> Anthony Bates	Director
March 29, 2018	<u>/s/ Michael Brown</u> Michael Brown	Director
March 29, 2018	<u>/s/ Donald Carty</u> Donald Carty	Director
March 29, 2018	<u>/s/ Egon Durban</u> Egon Durban	Director
March 29, 2018	<u>/s/ Karen Dykstra</u> Karen Dykstra	Director
March 29, 2018	<u>/s/ Paul Sagan</u> Paul Sagan	Director

VMWARE, INC.
SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS
(in millions)

Tax Valuation Allowance	Balance at Beginning of Period	Tax Valuation Allowance Charged to Income Tax Provision	Tax Valuation Allowance Credited to Income Tax Provision	Balance at End of Period
Year ended February 2, 2018 income tax valuation allowance	\$ 161	\$ 68	\$ (29)	\$ 200
Transition Period from January 1, 2017 to February 3, 2017 income tax valuation allowance	166	1	(6)	161
Year ended December 31, 2016 income tax valuation allowance	144	31	(9)	166
Year ended December 31, 2015 income tax valuation allowance	106	47	(9)	144

AMENDED AND RESTATED MASTER TRANSACTION AGREEMENT

among

EMC CORPORATION,

DELL TECHNOLOGIES INC.

and

VMWARE, INC.

TABLE OF CONTENTS

ARTICLE I DISTRIBUTION

- Section 1.1 Distribution Generally**
- Section 1.2 Dell Technologies' Sole Discretion**

ARTICLE II COVENANTS AND OTHER MATTERS

- Section 2.1 Other Agreements**
- Section 2.2 Agreement for Exchange of Information**
- Section 2.3 Auditors and Audits; Financial Statements; Accounting Matters**
- Section 2.4 Confidentiality.**
- Section 2.5 Privileged Matters.**
- Section 2.6 Future Litigation and Other Proceedings**
- Section 2.7 Mail and other Communications**
- Section 2.8 Payment of Expenses**
- Section 2.9 Dispute Resolution.**
- Section 2.10 Consent of Holders of Class B Common Stock.**
- Section 2.11 Governmental Approvals**
- Section 2.12 Rules of Engagement**
- Section 2.13 Compliance with Legal Policies.**
- Section 2.14 Guarantees**
- Section 2.15 Payment / Settlement of Intercompany Transactions**
- Section 2.16 Reporting of Certain Third-Party Transactions**

ARTICLE III REGISTRATION RIGHTS

- Section 3.1 Demand Registration**
- Section 3.2 Piggyback Registration.**
- Section 3.3 Expenses**
- Section 3.4 Blackout Period**
- Section 3.5 Selection of Underwriters**
- Section 3.6 Obligations of VMware**
- Section 3.7 Obligations of Selling Holders**
- Section 3.8 Underwriting; Due Diligence**
- Section 3.9 Indemnification and Contribution.**

Section 3.10	Rule 144 and Form S-3
Section 3.11	Holdback Agreement
Section 3.12	Term

ARTICLE IV MUTUAL RELEASES; INDEMNIFICATION

Section 4.1	Release of Pre-IPO Date Claims
Section 4.2	Indemnification by VMware
Section 4.3	Indemnification by Dell Technologies
Section 4.4	Ancillary Agreement Liabilities
Section 4.5	Other Agreements Evidencing Indemnification Obligations
Section 4.6	Reductions for Insurance Proceeds and other Recoveries
Section 4.7	Procedures for Defense, Settlement and Indemnification of the Third Party Claims
Section 4.8	Additional Matters
Section 4.9	Survival of Indemnities

ARTICLE V OPTION

Section 5.1	Option
Section 5.2	Notice
Section 5.3	Option Exercise and Payment
Section 5.4	Effect of Failure to Exercise
Section 5.5	Termination of Option

ARTICLE VI MISCELLANEOUS

Section 6.1	Limitation of Liability
Section 6.2	Entire Agreement
Section 6.3	Governing Law and Jurisdiction
Section 6.4	Termination; Amendment
Section 6.5	Notices
Section 6.6	Counterparts
Section 6.7	Binding Effect; Assignment
Section 6.8	Severability
Section 6.9	Failure or Indulgence not Waiver; Remedies Cumulative
Section 6.10	Authority
Section 6.11	Interpretation

Section 6.12	Conflicting Agreements
Section 6.13	Third Party Beneficiaries
Section 6.14	Consent of Dell Technologies

ARTICLE VII DEFINITIONS

Section 7.1	Defined Terms
--------------------	----------------------

EXHIBITS

Exhibit A	Rules of Engagement with Storage, Server and Infrastructure Software Vendors
------------------	---

AMENDED AND RESTATED MASTER TRANSACTION AGREEMENT

This Amended and Restated Master Transaction Agreement is dated as of January 9, 2018, among EMC Corporation, a Massachusetts corporation (“**EMC**”), Dell Technologies Inc., a Delaware corporation and EMC’s parent company (“**Dell Technologies**”), and VMware, Inc., a Delaware corporation (“**VMware**”). Capitalized terms used herein and not otherwise defined shall have the meanings ascribed to such terms in ARTICLE VII.

RECITALS

WHEREAS, EMC and VMware are parties to the Master Transaction Agreement dated as of August 17, 2007 (the “**Original Agreement**”);

WHEREAS, Dell Technologies acquired 100% of the capital stock of EMC upon the closing of the transactions contemplated by the Agreement and Plan of Merger dated as of October 12, 2015, as amended, among EMC, Dell Technologies and certain other parties; and

WHEREAS, EMC and VMware desire to amend and restate the Original Agreement as set forth in this Agreement and add Dell Technologies as a Party.

The Parties therefore amend and restate the Original Agreement to read in its entirety as follows:

ARTICLE I DISTRIBUTION

Section 1.1 Distribution Generally. If Dell Technologies, in its sole and absolute discretion, advises VMware that Dell Technologies intends to pursue a Distribution, VMware agrees to take all action reasonably requested by Dell Technologies to facilitate the Distribution.

Section 1.2 Dell Technologies’ Sole Discretion. Dell Technologies shall, in its sole and absolute discretion, determine whether to proceed with all or part of a Distribution, the date of the consummation of the Distribution and all terms of the Distribution, including, without limitation, the form, structure and terms of any transaction(s) and/or offering(s) to effect the Distribution and the timing of and conditions to the consummation of the Distribution. In addition, Dell Technologies may at any time and from time to time until the completion of the Distribution, modify or change the terms of the Distribution, including, without limitation, by accelerating or delaying the timing of the consummation of all or part of the Distribution. VMware shall cooperate with Dell Technologies in all respects to accomplish the Distribution and shall, at Dell Technologies’ direction, promptly take any and all actions that Dell Technologies deems reasonably necessary or desirable to effect the Distribution. Without limiting the generality of the foregoing, VMware shall, at Dell Technologies’ direction, cooperate with Dell Technologies, and execute and deliver, or use its reasonable best efforts to cause to have executed and delivered, all instruments, including instruments of conveyance, assignment and transfer, and to make all filings with, and to obtain all

consents, approvals or authorizations of, any domestic or foreign governmental or regulatory authority requested by Dell Technologies in order to consummate and make effective the Distribution. If, in connection with any Distribution, Dell Technologies makes a Request for a Demand Registration, the terms and the conditions set forth in ARTICLE III shall govern.

ARTICLE II

COVENANTS AND OTHER MATTERS

Section 2.1 Other Agreements. Dell Technologies and VMware agree to execute or cause to be executed by the appropriate parties and deliver, as appropriate, such other agreements, instruments and other documents as may be necessary or desirable in order to effect the purposes of this Agreement and the Inter-Company Agreements.

Section 2.2 Agreement for Exchange of Information.

(a) **Generally.** Each of Dell Technologies and VMware agrees to provide, or cause to be provided, to the other, at any time, as soon as reasonably practicable after written request therefor, any Information in the possession or under the control of such Party that the requesting Party reasonably needs (i) to comply with reporting, disclosure, filing or other requirements imposed on the requesting Party (including under applicable securities laws) by a Governmental Authority having jurisdiction over the requesting Party, (ii) for use in any other judicial, regulatory, administrative or other proceeding or in order to satisfy audit, accounting, claims, regulatory, litigation or other similar requirements, (iii) to comply with its obligations under this Agreement or any Inter-Company Agreement or (iv) during the period prior to the Distribution Date and thereafter to the extent such Information and cooperation is necessary to comply with such reporting, filing and disclosure obligations, for the preparation of financial statements or completing an audit, and as reasonably necessary to conduct the ongoing businesses of Dell Technologies or VMware, as the case may be; *provided, however*, that in the event that any Party determines that any such provision of Information could be commercially detrimental, violate any law or agreement, or waive any attorney-client privilege, the Parties shall take all reasonable measures to permit the compliance with such obligations in a manner that avoids any such harm or consequence. Each of Dell Technologies and VMware agree to make their respective personnel available to discuss the Information exchanged pursuant to this Section 2.2.

(b) **Internal Accounting Controls; Financial Information.** Each Party shall maintain in effect at its own cost and expense adequate systems and controls for its business to the extent necessary to enable the other Party to satisfy its reporting, tax return, accounting, audit and other obligations. Each Party shall provide, or cause to be provided, to the other Party and its Subsidiaries in such form as such requesting Party shall request, at no charge to the requesting Party, all financial and other data and information as the requesting Party determines necessary or advisable in order to prepare its financial statements and reports or filings with any Governmental Authority.

(c) Ownership of Information. Any Information owned by a Party that is provided to a requesting Party pursuant to this Section 2.2 shall be deemed to remain the property of the providing Party. Unless specifically set forth herein, nothing contained in this Agreement shall be construed as granting or conferring rights of license or otherwise in any such Information.

(d) Record Retention. To facilitate the possible exchange of Information pursuant to this Section 2.2 and other provisions of this Agreement after the Distribution Date, each Party agrees to use its reasonable best efforts until the Distribution Date to retain all Information in its respective possession or control substantially in accordance with its respective record retention policies and practices, and for such longer period as may be required by any Governmental Authority, any litigation matter, any applicable law or any Inter-Company Agreement. However, except as set forth in the Tax Sharing Agreement, at any time after the Distribution Date, each Party may amend its respective record retention policies at such Party's discretion; *provided, however*, that if a Party desires to effect the amendment within three (3) years after the Distribution Date, the amending Party must give thirty (30) days prior written notice of such change in the policy to the other Party to this Agreement.

(e) Limitation of Liability. Each Party will use its reasonable best efforts to ensure that Information provided to the other Party hereunder is accurate and complete; *provided, however*, no Party shall have any liability to any other Party in the event that any Information exchanged or provided pursuant to this Section 2.2 is found to be inaccurate, in the absence of gross negligence or willful misconduct by the party providing such Information. No Party shall have any liability to any other Party if any Information is destroyed or lost after the relevant Party has complied with the provisions of Section 2.2(d).

(f) Other Agreements Providing For Exchange of Information. The rights and obligations granted under this Section 2.2 are subject to any specific limitations, qualifications or additional provisions on the sharing, exchange or confidential treatment of Information set forth in this Agreement and any Inter-Company Agreement.

(g) Production of Witnesses; Records; Cooperation. For a period of seven (7) years after the first date upon which members of the Dell Technologies Group cease to own at least twenty percent (20%) of the then outstanding number of shares of Common Stock, and except in the case of a legal or other proceeding by one Party against the other Party, each Party hereto shall use its reasonable best efforts to make available to each other Party, upon written request, the former, current and future directors, officers, employees, other personnel and agents of such Party as witnesses and any books, records or other documents within its control or which it otherwise has the ability to make available, to the extent that any such person (giving consideration to business demands of such directors, officers, employees, other personnel and agents) or books, records or other documents may reasonably be required in connection with any legal, administrative or other proceeding in which the requesting Party may from time to time be involved, regardless of whether such legal, administrative or other proceeding is

a matter with respect to which indemnification may be sought hereunder. The requesting Party shall bear all costs and expenses in connection therewith.

Section 2.3 Auditors and Audits; Financial Statements; Accounting Matters. Each Party agrees that:

(a) Selection of Auditors.

(i) Until the first Dell Technologies fiscal year end occurring after the Distribution Date, VMware shall use its reasonable best efforts to select the independent certified public accountants (“**VMware’s Auditors**”) used by Dell Technologies to serve as its (and its Subsidiaries’) independent certified public accountants (“**Dell Technologies’ Auditors**” and, for the avoidance of doubt, should Dell Technologies at any time change the accounting firm serving as its independent certified public accountants, “Dell Technologies’ Auditors” shall thereafter mean the new firm serving as Dell Technologies’ independent certified public accountants) for purposes of providing an opinion on its consolidated financial statements; *provided, however*, that VMware’s Auditors may be different from Dell Technologies’ Auditors if necessary to comply with applicable laws regarding auditor independence and qualifications (*provided, however*, that VMware shall not take any actions, and shall use its reasonable best efforts to cause its directors, officers and employees not to take any actions, that could reasonably be expected to require VMware to engage auditors other than Dell Technologies’ Auditors). The foregoing shall not be construed so as to unlawfully limit any responsibility of the audit committee of VMware’s board of directors, pursuant to Rule 10A-3(b)(2), to appoint, compensate, retain and oversee the work of the registered public accounting firm VMware engages.

(ii) Until the first Dell Technologies fiscal year end occurring after the Distribution Date, VMware shall provide Dell Technologies as much prior notice as reasonably practical of any change in VMware’s Auditors for purposes of providing an opinion on its consolidated financial statements.

(b) Coordination of Auditors’ Opinions and Quarterly Reviews. So long as the ending dates of VMware’s fiscal periods differ from the ending dates of the corresponding fiscal periods of Dell Technologies, and thereafter to the extent necessary for the purpose of preparing financial statements or completing a financial statement audit, VMware shall use its reasonable best efforts to enable VMware’s Auditors to complete work necessary to enable Dell Technologies to meet its timetable for the printing, filing and public dissemination of Dell Technologies’ annual financial statements.

(c) Annual and Quarterly Financial Statements. Until the Distribution Date, VMware shall not change its fiscal year and, until the first Dell Technologies fiscal year end occurring after the Distribution Date and thereafter to the extent necessary for the purpose of preparing financial statements or completing a financial statement audit, shall provide to Dell Technologies on a timely basis all Information that Dell Technologies reasonably requires to meet its schedule for the preparation, printing, filing, and public dissemination of Dell Technologies’ annual,

quarterly and monthly financial statements. Without limiting the generality of the foregoing, VMware will provide all required financial Information with respect to VMware to VMware's Auditors in a sufficient and reasonable time and in sufficient detail to permit VMware's Auditors to take all steps and perform all reviews necessary to provide sufficient assistance to Dell Technologies' Auditors with respect to financial Information to be included or contained in Dell Technologies' annual, quarterly and monthly financial statements. Similarly, Dell Technologies shall provide to VMware on a timely basis all financial Information that VMware reasonably requires to meet its schedule for the preparation, printing, filing, and public dissemination of VMware's annual, quarterly and monthly financial statements. Without limiting the generality of the foregoing, Dell Technologies will provide all required financial Information with respect to Dell Technologies and its Subsidiaries to VMware's Auditors in a sufficient and reasonable time and in sufficient detail to permit VMware's Auditors to take all steps and perform all reviews necessary to provide sufficient assistance to VMware's Auditors with respect to Information to be included or contained in VMware's annual and quarterly financial statements.

(d) Certifications and Attestations.

(i) Until the first Dell Technologies fiscal year end occurring after the Distribution Date and thereafter to the extent necessary for the timely filing by Dell Technologies of annual and quarterly reports under the Exchange Act or in connection with any investigations of prior periods, VMware shall cause its principal executive officer and principal financial officer to provide to Dell Technologies on a timely basis and as reasonably requested by Dell Technologies (A) any certificates requested as support for the certifications and attestations required by Sections 302, 906 and 404 of the Sarbanes-Oxley Act of 2002, as amended, to be filed with such annual and quarterly reports, (B) any certificates or other written Information which such principal executive officer or principal financial officer received as support for the certificates provided to Dell Technologies and (C) a reasonable opportunity to discuss with such principal financial officer and other appropriate officers and employees of VMware any issues reasonably related to the foregoing.

(ii) To the extent necessary for the timely filing by VMware of annual and quarterly reports under the Exchange Act or in connection with any investigations of prior periods, Dell Technologies shall cause its appropriate officers and employees to provide to VMware on a timely basis and as reasonably requested by VMware (A) any certificates requested as support for the certifications and attestations required by Sections 302, 906 and 404 of the Sarbanes-Oxley Act of 2002, as amended, to be filed with such annual and quarterly reports, (B) any certificates or other Information which such appropriate officers and employees received as support for the certificates provided to VMware and (C) a reasonable opportunity to discuss with such appropriate officers and employees any issues reasonably related to the foregoing.

(e) Compliance With Laws, Policies and Regulations. Until the Distribution Date, VMware shall comply with the significant financial accounting and reporting rules, policies and directives of Dell Technologies, as agreed to by the

companies' respective chief accounting officers, and use reasonable efforts to fulfill all timing and reporting requirements applicable to Dell Technologies' Subsidiaries that are consolidated with Dell Technologies for financial statement purposes. VMware shall comply with all financial accounting and reporting rules and policies, and fulfill all timing and reporting requirements, under applicable federal securities laws and NYSE rules. VMware shall not be deemed to be in breach of its obligations set forth in this provision to the extent that VMware is unable to comply with such obligations as a result of the actions or inactions of Dell Technologies.

(f) Identity of Personnel Performing the Annual Audit and Quarterly Reviews. Until the Distribution Date and thereafter to the extent such information and cooperation is necessary for the preparation of financial statements or completing a financial statements audit, VMware shall authorize VMware's Auditors to make available to Dell Technologies' Auditors both the personnel who performed or will perform the annual audits and quarterly reviews of VMware and work papers related to the annual audits and quarterly reviews of VMware, in all cases within a reasonable time prior to VMware's Auditors' opinion date, so that Dell Technologies' Auditors are able to perform the procedures they consider necessary to take responsibility for the work of VMware's Auditors as it relates to Dell Technologies' Auditors' report on Dell Technologies' financial statements, all within sufficient time to enable Dell Technologies to meet its timetable for the printing, filing and public dissemination of Dell Technologies' annual and quarterly statements. Similarly, Dell Technologies shall authorize Dell Technologies' Auditors to make available to VMware's Auditors both the personnel who performed or will perform the annual audits and quarterly reviews of Dell Technologies and work papers related to the annual audits and quarterly reviews of Dell Technologies, in all cases within a reasonable time prior to Dell Technologies' Auditors' opinion date, so that VMware's Auditors are able to perform the procedures they consider necessary to take responsibility for the work of Dell Technologies' Auditors as it relates to VMware's Auditors' report on VMware's statements, all within sufficient time to enable VMware to meet its timetable for the printing, filing and public dissemination of VMware's annual and quarterly financial statements.

(g) Access to Books and Records. Until the Distribution Date and thereafter to the extent such information and cooperation is necessary for the preparation of financial statements or completing a financial statements audit, all governmental audits are complete and the applicable statute of limitations for tax matters has expired, VMware shall provide Dell Technologies' internal auditors, counsel and other designated representatives of Dell Technologies access during normal business hours to (i) the premises of VMware and all Information (and duplicating rights) within the knowledge, possession or control of VMware and (ii) the officers and employees of VMware, so that Dell Technologies may conduct reasonable audits relating to the financial statements provided by VMware pursuant hereto as well as to the internal accounting controls and operations of VMware. Similarly, Dell Technologies shall provide VMware's internal auditors, counsel and other designated representatives of VMware access during normal business hours to (x) the premises of Dell Technologies and its Subsidiaries and all Information (and duplicating rights with respect thereto)

within the knowledge, possession or control of Dell Technologies and its Subsidiaries and (y) the officers and employees of Dell Technologies and its Subsidiaries, so that VMware may conduct reasonable audits relating to the financial statements provided by Dell Technologies pursuant hereto as well as to the internal accounting controls and operations of Dell Technologies and its Subsidiaries.

(h) Notice of Change in Accounting Principles. Until the Distribution Date and thereafter if a change in accounting principles by a Party hereto would affect the historical financial statements of the other Party, neither Party shall make or adopt any significant changes in its accounting estimates or accounting principles without first consulting with the other Party, and if requested by the other Party, such Party's independent public accountants with respect thereto. Dell Technologies shall give VMware as much prior notice as reasonably practical of any proposed determination of, or any significant changes in, its accounting estimates or accounting principles. Dell Technologies will consult with VMware and, if requested by VMware, Dell Technologies will consult with VMware's independent public accountants with respect thereto. VMware shall give Dell Technologies as much prior notice as reasonably practical of any proposed determination of, or any significant changes in, its accounting estimates or accounting principles. VMware will consult with Dell Technologies and, if requested by Dell Technologies, VMware will consult with Dell Technologies' independent public accountants with respect thereto.

(i) Conflict With Third-Party Agreements. Nothing in Section 2.2 or this Section 2.3 shall require VMware to violate any agreement with any third party regarding the confidentiality of confidential and proprietary information relating to that third party or its business; *provided, however*, that in the event that VMware is required under Section 2.2 or this Section 2.3 to disclose any such Information, VMware shall use its reasonable best efforts to seek to obtain such third party's consent to the disclosure of such information.

Section 2.4 Confidentiality .

(a) "Confidential Information" means non-public technical, business and other information and materials that may be disclosed or otherwise made available by one party ("**Discloser**") (whether directly or indirectly by an affiliate) to the other Party (whether directly or indirectly to an affiliate) ("**Recipient**"), in any form, that are:

- (i) marked or identified as confidential or proprietary at the time of disclosure; or
- (ii) (A) provided under circumstances reasonably indicating their confidentiality and (B) would typically be treated by the Recipient as Confidential.

(b) Responsibilities Regarding Confidential Information . Recipient will:

(i) hold Discloser's Confidential Information in confidence and not disclose such Confidential Information to any third party;

(ii) not use Discloser's Confidential Information for any purpose except for the Purpose; and

(iii) take reasonable precautions (at least equivalent to those Recipient takes with respect to its own similar information) to prevent unauthorized disclosure or use of Discloser's Confidential Information and will maintain source code in strict confidence for perpetuity.

(c) Representatives . Recipient may only disclose Discloser's Confidential Information to its own employees, consultants, affiliates and advisors who reasonably require it to carry out their function in connection with the Purpose and have agreed in writing to terms at least as protective as those set forth in this Agreement (" **Representatives** "). Recipient is responsible for any acts or omissions of its Representatives that, if taken by Recipient, would constitute a breach of this Agreement.

(d) Exceptions and Clarifications .

(i) Recipient's obligations under this Agreement will not apply to any Confidential Information to the extent it:

(A) is now, or subsequently becomes, generally available through no wrongful act or omission of Recipient or its Representatives;

(B) was, before receipt from Discloser, or becomes rightfully known to Recipient without confidentiality restrictions through disclosure from a source other than Discloser that does not owe a duty of confidentiality to Discloser with respect to such Confidential Information; or

(C) is independently developed by Recipient without using any Confidential Information of Discloser.

(ii) Recipient may disclose Discloser's Confidential Information to the extent required by law or regulation. Recipient will give Discloser reasonable advance notice of any such required disclosure and will limit the scope of such disclosure to the minimum required by the law or regulation.

(iii) Nothing in this Agreement will restrict or limit the right of Recipient to assign personnel for any purpose or to independently develop, offer or otherwise deal in products or services competitive with those of Discloser without using Discloser's Confidential Information.

(iv) All Confidential Information disclosed under this Agreement will remain the property of Discloser. No license or right under any intellectual property right is granted under this Agreement or by any disclosure of Confidential Information except as expressly stated in this Agreement.

(e) **Warranty.** Discloser warrants that it has the right to disclose Confidential Information but makes no other warranties, express or implied. CONFIDENTIAL INFORMATION IS PROVIDED ON AN “AS IS” BASIS.

(f) **Non-Disclosure Period.** Regardless of any expiration or termination of this Agreement, Recipient must meet its obligations with respect to Confidential Information under this Agreement for five years after receipt of that Confidential Information (except for source code, which must be kept in confidence for perpetuity). Upon written request of the Discloser, Recipient will promptly return to Discloser or destroy (or in the case of electronic data, use commercially reasonable efforts to delete or render practicably inaccessible by recipient) Confidential Information of Discloser.

Section 2.5 Privileged Matters.

(a) Dell Technologies and VMware agree that their respective rights and obligations to maintain, preserve, assert or waive any or all privileges belonging to either corporation or their Subsidiaries with respect to the VMware Business or the business of Dell Technologies, including but not limited to the attorney-client and work product privileges (collectively, “**Privileges**”), shall be governed by the provisions of this Section 2.5. With respect to Privileged Information of Dell Technologies (as defined below), Dell Technologies shall have sole authority in perpetuity to determine whether to assert or waive any or all Privileges, and VMware shall take no action (nor permit any of its Subsidiaries to take action) without the prior written consent of Dell Technologies that could result in any waiver of any Privilege that could be asserted by Dell Technologies or any of its Subsidiaries under applicable law and this Agreement. With respect to Privileged Information of VMware (as defined below) VMware shall have sole authority in perpetuity to determine whether to assert or waive any or all Privileges, and Dell Technologies shall take no action (nor permit any of its Subsidiaries to take action) without the prior written consent of VMware that could result in any waiver of any Privilege that could be asserted by VMware or any of its Subsidiaries under applicable law and this Agreement. The rights and obligations created by this Section 2.5 shall apply to all Information as to which Dell Technologies or VMware or their respective Subsidiaries would be entitled to assert or has asserted a Privilege without regard to the effect, if any, of the Distribution (“**Privileged Information**”). Privileged Information of Dell Technologies includes but is not limited to (i) any and all Information regarding the business of Dell Technologies and its Subsidiaries (other than Information regarding the VMware Business;), whether or not it is in the possession of VMware or any of its Subsidiaries; (ii) all communications subject to a Privilege between counsel for Dell Technologies (including in-house counsel) and any person who, at the time of the communication, was an employee of Dell Technologies, regardless of whether such employee is or becomes an employee of VMware or any of its Subsidiaries and (iii) all Information that refers or relates to Privileged Information of Dell Technologies. Privileged Information of VMware includes but is not limited to (x) any and all Information regarding the VMware Business, whether or not it is in the possession of Dell Technologies or any of its Subsidiaries; (y) all communications subject to a Privilege occurring between counsel for the VMware Business (including in-house counsel) and

any person who, at the time of the communication, was an employee of VMware, regardless of whether such employee was, is or becomes an employee of Dell Technologies or any of its Subsidiaries (other than VMware and its Subsidiaries) and (z) all Information that refers or relates to Privileged Information of VMware.

(b) Upon receipt by Dell Technologies or VMware, as the case may be, of any subpoena, discovery or other request from any third party that actually or arguably calls for the production or disclosure of Privileged Information of the other or if Dell Technologies or VMware, as the case may be, obtains knowledge that any current or former employee of Dell Technologies or VMware, as the case may be, has received any subpoena, discovery or other request from any third party that actually or arguably calls for the production or disclosure of Privileged Information of the other, Dell Technologies or VMware, as the case may be, shall promptly notify the other of the existence of the request and shall provide the other a reasonable opportunity to review the Information and to assert any rights it may have under this Section 2.5 or otherwise to prevent the production or disclosure of Privileged Information. Dell Technologies or VMware, as the case may be, will not produce or disclose to any third party any of the other's Privileged Information under this Section 2.5 unless (i) the other has provided its express written consent to such production or disclosure or (ii) a court of competent jurisdiction has entered an order not subject to interlocutory appeal or review finding that the Information is not entitled to protection from disclosure under any applicable privilege, doctrine or rule.

(c) The access to Information, witnesses and individuals being granted pursuant to Section 2.2 and Section 2.3 and the disclosure to VMware and Dell Technologies of Privileged Information relating to the VMware Business or the business of Dell Technologies pursuant to this Agreement shall not be asserted by Dell Technologies or VMware to constitute, or otherwise deemed, a waiver of any Privilege that has been or may be asserted under this Section 2.5 or otherwise. Nothing in this Agreement shall operate to reduce, minimize or condition the rights granted to Dell Technologies and VMware in, or the obligations imposed upon Dell Technologies and VMware by, this Section 2.5.

Section 2.6 Future Litigation and Other Proceedings. In the event that VMware (or any of its Subsidiaries or any of its or their respective officers or directors) or Dell Technologies (or any of its Subsidiaries or any of its or their respective officers or directors) at any time after the date hereof initiates or becomes subject to any litigation or other proceedings before any Governmental Authority with respect to which the Parties have no prior agreements (as to indemnification or otherwise), the Party (and its Subsidiaries and its and their respective officers and directors) that has not initiated and is not subject to such litigation or other proceedings shall comply, at the other Party's expense, with any reasonable requests by the other Party for assistance in connection with such litigation or other proceedings (including by way of provision of information and making available of associates or employees as witnesses). In the event that VMware (or any of its Subsidiaries or any of its or their respective officers or directors) and Dell Technologies (or any of its Subsidiaries or any of its or their respective officers or directors) at any time after the date hereof initiate or become subject to any litigation or

other proceedings before any Governmental Authority with respect to which the Parties have no prior agreements (as to indemnification or otherwise), each Party (and its officers and directors) shall, at their own expense, coordinate their strategies and actions with respect to such litigation or other proceedings to the extent such coordination would not be detrimental to their respective interests and shall comply, at the expense of the requesting Party, with any reasonable requests of the other Party for assistance in connection therewith (including by way of provision of information and making available of employees as witnesses).

Section 2.7 Mail and other Communications. Each of Dell Technologies and VMware may receive mail, facsimiles, packages and other communications properly belonging to the other. Accordingly, each of Dell Technologies and VMware authorizes the other to receive and open all mail, telegrams, packages and other communications received by it and not unambiguously intended for the other Party or any of the other Party's officers or directors, and to retain the same to the extent that they relate to the business of the receiving Party or, to the extent that they do not relate to the business of the receiving Party, the receiving Party shall promptly deliver such mail, telegrams, packages or other communications, including, without limitation, notices of any liens or encumbrances on any asset transferred to VMware in connection with its separation from EMC, (or, in case the same relate to both businesses, copies thereof) to the other Party as provided for in Section 6.5. The provisions of this Section 2.7 are not intended to, and shall not, be deemed to constitute (a) an authorization by either Dell Technologies or VMware to permit the other to accept service of process on its behalf and neither Party is or shall be deemed to be the agent of the other for service of process purposes or (b) a waiver of any Privilege with respect to Privileged Information contained in such mail, telegrams, packages or other communications.

Section 2.8 Payment of Expenses. Except as otherwise provided in this Agreement, the Inter-Company Agreements or any other agreement between the Parties relating to the Distribution, (a) all costs and expenses of the Parties hereto in connection with the Distribution shall be paid by VMware and (b) all costs and expenses of the Parties hereto in connection with any matter not relating to the Distribution shall be paid by the Party which incurs such costs or expenses. Notwithstanding the foregoing, VMware and Dell Technologies shall each be responsible for their own internal fees, costs and expenses (e.g., salaries of personnel) incurred in connection with the Distribution.

Section 2.9 Dispute Resolution.

(a) Any dispute, controversy or claim arising out of or relating to this Agreement or the Inter-Company Agreements, other than the Tax Sharing Agreement, or the breach, termination or validity thereof (“**Dispute**”) which arises between the Parties shall first be negotiated between appropriate senior executives of each Party who shall have the authority to resolve the matter. Such executives shall meet to attempt in good faith to negotiate a resolution of the Dispute prior to pursuing other available remedies, within ten (10) days of receipt by a Party of notice of a Dispute, which date of receipt shall be referred to herein as the “**Dispute Resolution**”

Commencement Date .” Discussions and correspondence relating to trying to resolve such Dispute shall be treated as Confidential Information and Privileged Information of each of Dell Technologies and VMware developed for the purpose of settlement and shall be exempt from discovery or production and shall not be admissible in any subsequent proceeding between the Parties.

(b) If the senior executives are unable to resolve the Dispute within sixty (60) days from the Dispute Resolution Commencement Date, then, the Dispute will be submitted to the boards of directors of Dell Technologies and VMware. Representatives of each board of directors shall meet as soon as practicable to attempt in good faith to negotiate a resolution of the Dispute.

(c) If the representatives of the two boards of directors are unable to resolve the Dispute within one hundred twenty (120) days from the Dispute Resolution Commencement Date, on the request of any Party, the Dispute will be mediated by a mediator appointed pursuant to the mediation rules of the American Arbitration Association. Both Parties will share the administrative costs of the mediation and the mediator’s fees and expenses equally, and each Party shall bear all of its other costs and expenses related to the mediation, including but not limited to attorney’s fees, witness fees, and travel expenses. The mediation shall take place in Santa Clara County, California or in whatever alternative forum on which the Parties may agree.

(d) If the Parties cannot resolve any Dispute through mediation within forty-five days of the appointment of the mediator (or the earlier withdrawal thereof), each Party shall be entitled to seek relief in a court of competent jurisdiction.

Unless otherwise agreed in writing, the Parties will continue to provide service and honor all other commitments under this Agreement and each Inter-Company Agreement during the course of dispute resolution pursuant to the provisions of this Section 2.10 with respect to all matters not subject to such dispute, controversy or claim.

Section 2.10 Consent of Holders of Class B Common Stock.

(a) Prior to the first date on which members of the Dell Technologies Group cease to beneficially own twenty percent (20%) or more of the aggregate number of shares of the then outstanding Common Stock, the prior affirmative vote of the holders of a majority of the outstanding shares of the Class B common stock, voting separately as a class, shall be required to authorize VMware to (and (in the case of clauses (iii) through (v) below) authorize or permit any Subsidiary of VMware to):

- (i) adopt or implement any stockholder rights plan or similar takeover defense measure;
- (ii) consolidate or merge with or into any Person;

(iii) permit any Subsidiary of VMware to consolidate or merge with or into any Person (other than (1) a consolidation or merger of a Wholly-Owned Subsidiary with or into VMware or with or into another Wholly-Owned Subsidiary or (2) in connection with a Permitted Acquisition);

(iv) directly or indirectly acquire Stock, Stock Equivalents or assets, other than capital assets, (including, without limitation, any business or operating unit) of any Person (other than VMware or its Subsidiaries), in each case in a single transaction, or series of related transactions, involving consideration (whether in cash, securities, assets or otherwise, and including Indebtedness assumed by VMware or any of its Subsidiaries and Indebtedness of any entity so acquired) paid or delivered by VMware and its Subsidiaries in excess of \$100,000,000; *provided, however*, this Section 2.10(a)(iv) shall not require the vote of the holders of Class B common stock in connection with acquisitions of securities pursuant to portfolio investment decisions in the ordinary course of business or transactions to which VMware and one or more Wholly-Owned Subsidiaries are the only parties;

(v) issue any Stock or any Stock Equivalents, except (1) the issuance of shares of Stock of a Wholly-Owned Subsidiary of VMware to VMware or another Wholly-Owned Subsidiary of VMware or (2) the issuance of shares of Class A common stock or options or other rights to purchase Class A common stock pursuant to employee benefit plans or dividend reinvestment plans approved by the board of directors of VMware (provided, however, that notwithstanding the provision of this clause (2), the prior affirmative vote of the holders of a majority of the outstanding shares of the Class B common stock, voting separately as a class, shall be required to authorize VMware to finally determine the aggregate size of its annual equity grants);

(vi) dissolve, liquidate or wind up VMware;

(vii) declare dividends on any class or series of the capital stock of VMware;

(viii) enter into any arrangement or agreement with any Person which the board of directors of VMware determines to be on terms exclusionary to EMC or that are exclusive to such Person, where such Person is offering or proposes to offer products or services that are substantially equivalent to products and services offered by EMC; and

(ix) alter, amend, terminate or repeal, or adopt any provision inconsistent with, in each case whether directly or indirectly, or by merger, consolidation or otherwise, Article V or VI or Sections A, C through G or J of Article VII of the Certificate of Incorporation of VMware or Sections 2.2, 2.8(D), 2.11, 3.2(A), 3.2(C), 3.9 or 3.11 of the Amended and Restated Bylaws of VMware.

(b) VMware shall not undertake any action or conduct that would have the effect of indirectly engaging VMware in activities that the provisions of this Section 2.10 would otherwise prohibit.

Section 2.11 Governmental Approvals. To the extent that any of the transactions contemplated by this Agreement requires any Governmental Approvals, the Parties will use their reasonable best efforts to obtain any such Governmental Approvals.

Section 2.12 Rules of Engagement. VMware's Rules of Engagement with Storage, Server and Infrastructure Software Vendors (the “**Rules of Engagement**”) in

effect as of the date hereof are attached as **Exhibit A** hereto. VMware has conducted the VMware Business in accordance with the Rules of Engagement since January 2004 and will continue to conduct the VMware Business in accordance with the Rules of Engagement unless the Rules of Engagement are modified by the board of directors of VMware, at which time VMware will conduct the VMware Business according to the modified rules.

Section 2.13 Compliance with Legal Policies.

(a) For so long as a Party is providing legal services under the Administrative Services Agreement, the other Party shall comply with all policies and directives identified by the providing Party as critical to legal and regulatory compliance; *provided, however*, that nothing contained herein shall preclude modifications to such policies or directives as shall, in the opinion of counsel to VMware or Dell Technologies, be necessary or desirable to comply with then applicable law. Until the Distribution Date, VMware shall not adopt policies or directives relating to legal or regulatory compliance that are inconsistent with the policies and directives identified by Dell Technologies as critical to legal and regulatory compliance.

(b) For so long as a Party is providing services under the Administrative Services Agreement, it will take reasonable steps to assure that the employees providing such services comply with all policies and directives identified by the other Party as critical to legal and regulatory compliance that are applicable to such employees.

Section 2.14 Guarantees . Each Party agrees that it will not renew or extend any lease, contract or agreement guaranteed by the other Party without the consent of the guaranteeing Party.

Section 2.15 Payment / Settlement of Intercompany Transactions . Both Parties and their subsidiaries have the intent, right and ability to apply right of offset to amounts owed to or from each of the parties through a net settlement process. The net settlement will take place in accordance with the mutually agreed upon process that will define the timing and specific transactions to be settled.

Section 2.16 Reporting of Certain Third-Party Transactions . On or before the 30th calendar day following the end of each VMware fiscal year, VMware shall provide to Dell Technologies a list, in writing, of each transaction entered into by VMware during such completed fiscal year in which VMware agreed to sell products or services to any third party on the basis of prices better than the prices at which VMware sold the equivalent products or services to Dell Technologies during such fiscal year for internal use or for hosting services, but not for resale as standalone products or bundled with any Dell Technologies or third-party products. The foregoing list also shall identify, for each such transaction, the (1) customer, (2) transaction date, (3) transaction amount (in U.S. dollars or other applicable currency) and (4) percentage or amount of discount from VMware's then-current applicable list price to the extent better than that offered by VMware to Dell Technologies.

ARTICLE III
REGISTRATION RIGHTS

Section 3.1 Demand Registration .

(a) The Holders shall have the right to request in writing (a “**Request**”) (which request shall specify the Registrable Securities intended to be disposed of by such Holders and the intended method of distribution thereof, including in a Rule 415 Offering, if VMware is then eligible to register such Registrable Securities on Form S-3 (or a successor form) for such offering) that VMware register such portion of such Holders’ Registrable Securities as shall be specified in the Request (a “**Demand Registration**”) by filing with the Commission, as soon as practicable thereafter, but not later than the 45th day (or the 75th day if the applicable registration form is other than Form S-3) after the receipt of such a Request by VMware, a registration statement (a “**Demand Registration Statement**”) covering such Registrable Securities, and VMware shall use its reasonable best efforts to have such Demand Registration Statement become effective with the Commission concurrently with filing or as soon as practicable thereafter, but in no event later than the 90th day (or the 105th day if the applicable registration form is other than Form S-3) after the receipt of such a Request, and, subject to Section 3.4, to keep such Demand Registration Statement Continuously Effective for a period of at least twenty-four (24) months, in the case of a Rule 415 Offering, or, in all other cases, for a period of at least 180 days following the date on which such Demand Registration Statement is declared effective (or for such shorter period which will terminate when all of the Registrable Securities covered by such Demand Registration Statement shall have been sold pursuant thereto), including, if necessary, by filing with the Commission a post-effective amendment or a supplement to the Demand Registration Statement or the related prospectus or any document incorporated therein by reference or by filing any other required document or otherwise supplementing or amending the Demand Registration Statement, if required by the rules, regulations or instructions applicable to the registration form used by VMware for such Demand Registration Statement or by the Securities Act, the Exchange Act, any state securities or blue sky laws, or any rules and regulations thereunder; *provided, however*, that such period during which the Demand Registration Statement shall remain Continuously Effective shall, in the case of an Underwritten Offering, and subject to Section 3.4, be extended for such period (if any) as the underwriters shall reasonably require, including to satisfy, in the judgment of counsel to the underwriters, any prospectus delivery requirements imposed by applicable law.

(b) VMware shall not be obligated to effect more than two (2) Demand Registrations in any calendar year. For purposes of the preceding sentence, a Demand Registration shall not be deemed to have been effected (and, therefore, not requested for purposes of paragraph (a) above), (i) unless a Demand Registration Statement with respect thereto has become effective, (ii) if after such Demand Registration Statement has become effective, the offer, sale or distribution of Registrable Securities thereunder is prevented by any stop order, injunction or other order or requirement of the Commission or other governmental agency or court for any reason not attributable to any Holder and such effect is not thereafter eliminated or (iii) if the

conditions to closing specified in the purchase agreement or underwriting agreement entered into in connection with such registration are not satisfied or waived other than by reason of a failure on the part of any Holder. If VMware shall have complied with its obligations under this ARTICLE III, a right to a Demand Registration pursuant to this Section 3.1 shall be deemed to have been satisfied upon the earlier of (x) the date as of which all of the Registrable Securities included therein shall have been sold to the underwriters or distributed pursuant to the Demand Registration Statement and (y) the date as of which such Demand Registration Statement shall have been effective for an aggregate period of at least twenty-four (24) months, in the case of a Rule 415 Offering, or, in all other cases, for a period of at least 180 days following the effectiveness of such Demand Registration Statement.

(c) Any request made pursuant to this Section 3.1 shall be addressed to the attention of the secretary of VMware, and shall specify the number of Registrable Securities to be registered (which shall be not less than the lesser of (x) 5% of the total number of Registrable Securities outstanding or (y) the remaining balance of the Registrable Securities then held by the Holders).

(d) VMware may not include in a Demand Registration pursuant to Section 3.1 hereof shares of VMware Capital Stock for the account of VMware or any Subsidiary of VMware, but, if and to the extent required by a contractual obligation, may, subject to compliance with Section 3.1(e), include shares of VMware Capital Stock for the account of any other Person who holds shares of VMware Capital Stock entitled to be included therein; *provided, however*, that if the Underwriters' Representative of any offering described in this Section 3.1 shall have informed VMware in writing that in its judgment there is a Maximum Number of shares of VMware Capital Stock that all Holders and any other Persons desiring to participate in such Demand Registration may include in such offering, then VMware shall include in such Demand Registration all Registrable Securities requested to be included in such registration by the Holders together with up to such additional number of shares of VMware Capital Stock that any other Persons entitled to participate in such registration desire to include in such registration up to the Maximum Number that the Underwriters' Representative has informed VMware may be included in such registration without materially and adversely affecting the success or pricing of such offering; *provided, however*, that the number of shares of VMware Capital Stock to be offered for the account of all such other Persons participating in such registration shall be reduced in a manner determined by VMware in its sole discretion.

(e) No Holder may participate in any Underwritten Offering under Section 3.1 hereof and no other Person shall be permitted to participate in any such offering pursuant to Section 3.1 hereof unless it completes and executes all customary questionnaires, powers of attorney, custody agreements, underwriting agreements and other customary documents required under the customary terms of such underwriting arrangements. In connection with any Underwritten Offering under Section 3.1 hereof, each participating Holder and VMware and, except in the case of a Rule 415 Offering hereof, each other Person shall be a party to the underwriting agreement with the underwriters and may be required to make certain customary representations and

warranties and provide certain customary indemnifications for the benefits of the underwriters; *provided, however*, that the Holders shall not be required to make representations and warranties with respect to VMware or their business and operations and shall not be required to agree to any indemnity or contribution provisions less favorable to them than as are set forth herein.

Section 3.2 Piggyback Registration.

(a) In the event that VMware at any time proposes to register any of its VMware Capital Stock, any other of its equity securities or securities convertible into or exchangeable for its equity securities (collectively, including VMware Capital Stock, “**Other Securities**”) under the Securities Act, either in connection with a primary offering for cash for the account of VMware, a secondary offering or a combined primary and secondary offering, VMware will each time it intends to effect such a registration, give written notice (a “**Company Notice**”) to all Holders of Registrable Securities at least ten (10) business days prior to the initial filing of a registration statement with the Commission pertaining thereto, informing such Holders of its intent to file such registration statement and of the Holders’ right to request the registration of the Registrable Securities held by the Holders. Upon the written request of the Holders made within seven (7) business days after any such Company Notice is given (which request shall specify the Registrable Securities intended to be disposed of by such Holder and the intended distribution thereof, *provided, however*, if (i) the Registrable Securities intended to be disposed of are Class A common stock and (ii) the applicable registration is intended to effect a primary offering of Class A common stock for cash for the account of VMware, such request shall specify only the Registrable Securities intended to be disposed of by such Holder), VMware will use its reasonable best efforts to effect the registration under the Securities Act of all Registrable Securities which VMware has been so requested to register by the Holders to the extent required to permit the disposition (in accordance with the intended methods of distribution thereof or, in the case of a registration which is intended to effect a primary offering for cash for the account of VMware, in accordance with VMware’s intended method of distribution) of the Registrable Securities so requested to be registered, including, if necessary, by filing with the Commission a post-effective amendment or a supplement to the registration statement filed by VMware or the related prospectus or any document incorporated therein by reference or by filing any other required document or otherwise supplementing or amending the registration statement filed by VMware, if required by the rules, regulations or instructions applicable to the registration form used by VMware for such registration statement or by the Securities Act, any state securities or blue sky laws, or any rules and regulations thereunder; *provided, however*, that if, at any time after giving written notice of its intention to register any Other Securities and prior to the Effective Date of the registration statement filed in connection with such registration, VMware shall determine for any reason not to register or to delay such registration of the Other Securities, VMware shall give written notice of such determination to each Holder of Registrable Securities and, thereupon, (i) in the case of a determination not to register, VMware shall be relieved of its obligation to register any Registrable Securities in connection with such registration (but not from its obligation to pay the Registration Expenses incurred in

connection therewith or from VMware's obligations with respect to any subsequent registration) and (ii) in the case of a determination to delay such registration, VMware shall be permitted to delay registration of any Registrable Securities requested to be included in such registration statement for the same period as the delay in registering such Other Securities.

(b) If, in connection with a registration statement pursuant to this Section 3.2, the Underwriters' Representative of the offering registered thereon shall inform VMware in writing that in its opinion there is a Maximum Number of shares of VMware Capital Stock that may be included therein and if such registration statement relates to an offering initiated by VMware of Common Stock being offered for the account of VMware, VMware shall include in such registration: (i) first, the number of shares VMware proposes to offer (" **Company Securities** "), (ii) second, up to the full number of Registrable Securities held by Holders of Registrable Securities that are requested to be included in such registration (Registrable Securities that are so held being sometimes referred to herein as " **Dell Technologies Securities** ") to the extent necessary to reduce the respective total number of shares of VMware Capital Stock requested to be included in such offering to the Maximum Number recommended by such Underwriters' Representative (and in the event that such Underwriters' Representative advises that less than all of such Dell Technologies Securities may be included in such offering, the Holders of Registrable Securities may withdraw their request for registration of their Registrable Securities under this Section 3.2 and not less than 90 days subsequent to the Effective Date of the registration statement for the registration of such Other Securities request that such registration be effected as a registration under Section 3.1 to the extent permitted thereunder) and (iii) third, up to the full number of the Other Securities (other than Company Securities), if any, in excess of the number of Company Securities and Dell Technologies Securities to be sold in such offering to the extent necessary to reduce the respective total number of shares of VMware Capital Stock requested to be included in such offering to the Maximum Number recommended by such Underwriters' Representative (and, if such number is less than the full number of such Other Securities, such number shall be allocated pro rata among the holders of such Other Securities (other than Company Securities) on the basis of the number of securities requested to be included therein by each such holder).

(c) If, in connection with a registration statement pursuant to this Section 3.2, the Underwriters' Representative of the offering registered thereon shall inform VMware in writing that in its opinion there is a Maximum Number of shares of VMware Capital Stock that may be included therein and if such registration statement relates to an offering initiated by any Person other than VMware (the " **Other Holders** "), VMware shall include in such registration the number of securities (including Registrable Securities) that such underwriters advise can be so sold without adversely affecting such offering, allocated pro rata among the Other Holders and the Holders of Registrable Securities on the basis of the number of securities (including Registrable Securities) requested to be included therein by each Other Holder and Holder of Registrable Securities.

(d) No Holder may participate in any Underwritten Offering under this Section 3.2 and no other Person shall be permitted to participate in any such offering pursuant to this Section 3.2 unless it completes and executes all customary questionnaires, powers of attorney, custody agreements, underwriting agreements and other customary documents required under the customary terms of such underwriting arrangements. In connection with any Underwritten Offering under this Section 3.2, each participating Holder and VMware and each such other Person shall be a party to the underwriting agreement with the underwriters of such offering and may be required to make certain customary representations and warranties and provide certain customary indemnifications for the benefits of the underwriters; *provided, however*, that the Holders shall not be required to make representations and warranties with respect to VMware or their business and operations and shall not be required to agree to any indemnity or contribution provisions less favorable to them than as are set forth herein.

(e) VMware shall not be required to effect any registration of Registrable Securities under this Section 3.2 incidental to the registration of any of its securities in connection with VMware's issuance of registered shares of VMware Capital Stock in mergers, acquisitions, reorganizations, exchange offers, subscription offers, dividend reinvestment plans or stock option or other executive or employee benefit or compensation plans.

(f) The registration rights granted pursuant to the provisions of this Section 3.2 shall be in addition to the registration rights granted pursuant to Section 3.1. No registration of Registrable Securities effected under this Section 3.2 shall relieve VMware of its obligation to effect a registration of Registrable Securities pursuant to Section 3.1.

Section 3.3 Expenses. Except as provided herein, VMware shall pay all Registration Expenses in connection with all registrations of Registrable Securities. Notwithstanding the foregoing, each Holder of Registrable Securities and VMware shall be responsible for its own internal administrative fees, costs and expenses (including, but not limited to, salaries of personnel), which shall not constitute Registration Expenses.

Section 3.4 Blackout Period. VMware shall be entitled to elect that a registration statement not be usable, or that the filing thereof be delayed beyond the time otherwise required, for a reasonable period of time (a "**Blackout Period**"), if VMware reasonably determines in good faith that the registration and distribution of Registrable Securities would interfere with any pending material financing, merger, acquisition, consolidation, recapitalization, corporate reorganization or any other material corporate development involving VMware or any of its Subsidiaries or would require premature disclosure thereof that would be detrimental to VMware, and VMware promptly gives the Holders of Registrable Securities written notice of such determination, and if requested by Holders and to the extent such action would not violate applicable law, VMware will promptly deliver to the Holders a general statement of the reasons for such postponement or restriction on use and to the extent practicable an approximation of the anticipated delay, and promptly gives the Holders of Registrable Securities written notice at the conclusion of such Blackout Period. For the avoidance of doubt, the Parties agree that an

election by VMware that a registration statement for the registration and distribution of Registrable Securities shall not be usable, or shall be delayed, during a Blackout Period shall not act to reduce the period during which such registration statement shall remain effective pursuant to the terms of this ARTICLE III.

Section 3.5 Selection of Underwriters. If any Rule 415 Offering or any offering pursuant to a Demand Registration Statement is an Underwritten Offering, Dell Technologies will select a managing underwriter or underwriters to administer the offering, which managing underwriter shall be reasonably satisfactory to VMware. VMware shall have the right to select a managing underwriter or underwriters to administer any Underwritten Offering contemplated by Section 3.2.

Section 3.6 Obligations of VMware. If and whenever VMware is required to effect the registration of any Registrable Securities under the Securities Act as provided in this ARTICLE III, VMware shall as promptly as practicable:

(a) prepare, file and use its reasonable best efforts to cause to become effective a registration statement under the Securities Act relating to the Registrable Securities to be offered;

(b) prepare and file with the Commission such amendments and supplements to such registration statement and the prospectus (including any issuer free writing prospectus required to be so filed) used in connection therewith as may be necessary to keep such registration statement effective and to comply with the provisions of the Securities Act with respect to the disposition of all Registrable Securities until the earlier of (i) such time as all of such Registrable Securities have been disposed of in accordance with the intended methods of disposition set forth in such registration statement and (ii) the expiration of one hundred eighty (180) days after such registration statement becomes effective; *provided, however*, that such one hundred eighty (180) day period shall be extended for such number of days that equals the number of days elapsing from (x) the date the written notice contemplated by paragraph (f) below is given by VMware to (y) the date on which VMware delivers to Holders of Registrable Securities the supplement or amendment contemplated by paragraph (f) below;

(c) furnish to Holders of Registrable Securities and to any underwriter of such Registrable Securities such number of conformed copies of such registration statement and of each such amendment and supplement thereto (in each case including all exhibits), such number of copies of the prospectus included in such registration statement (including each preliminary prospectus, any summary prospectus and any issuer free writing prospectus), in conformity with the requirements of the Securities Act, such documents incorporated by reference in such registration statement or prospectus, and such other documents, as Holders of Registrable Securities or such underwriter may reasonably request, and a copy of any and all transmittal letters or other correspondence to or received from the Commission or any other governmental agency or self-regulatory body or other body having jurisdiction (including any domestic or foreign securities exchange) relating to such offering;

(d) use its reasonable best efforts to register or qualify all Registrable Securities covered by such registration statement under the securities or blue sky laws of such jurisdictions as the Holders of such Registrable Securities or any underwriter to such Registrable Securities shall request, and use its reasonable best efforts to obtain all appropriate registrations, permits and consents in connection therewith, and do any and all other acts and things which may be necessary or advisable to enable the Holders of Registrable Securities or any such underwriter to consummate the disposition in such jurisdictions of its Registrable Securities covered by such registration statement; *provided, however*, that VMware shall not for any such purpose be required to qualify generally to do business as a foreign corporation in any such jurisdiction wherein it is not so qualified or to consent to general service of process in any such jurisdiction;

(e) (i) use its reasonable best efforts to furnish to each Holder of Registrable Securities included in such registration (each, a “**Selling Holder**”) and to any underwriter of such Registrable Securities an opinion of counsel for VMware addressed to each Selling Holder and dated the date of the closing under the underwriting agreement (if any) (or if such offering is not underwritten, dated the Effective Date of the

registration statement) and (ii) use its reasonable best efforts to furnish to each Selling Holder a “cold comfort” letter addressed to each Selling Holder and signed by the independent public accountants who have audited the financial statements of VMware included in such registration statement, in each such case covering substantially the same matters with respect to such registration statement (and the prospectus included therein) as are customarily covered in opinions of issuer’s counsel and in accountants’ letters delivered to underwriters in underwritten public offerings of securities and such other matters as the Selling Holders may reasonably request and, in the case of such accountants’ letter, with respect to events subsequent to the date of such financial statements;

(f) as promptly as practicable, notify the Selling Holders in writing (i) at any time when a prospectus or, prior to such time as a final prospectus is available, an issuer free writing prospectus relating to a registration made pursuant to Section 3.1 or Section 3.2 contains an untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading due to the occurrence of any event and (ii) of any request by the Commission or any other regulatory body or other body having jurisdiction for any amendment of or supplement to any registration statement or other document relating to such offering, and in either such case, at the request of the Selling Holders prepare and furnish to the Selling Holders a reasonable number of copies of a supplement to or an amendment of such prospectus or, prior to such time as a final prospectus is available, such issuer free writing prospectus as may be necessary so that, as thereafter delivered to the purchasers of such Registrable Securities, such prospectus shall not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they are made, not misleading;

(g) if reasonably requested by the lead or managing underwriters, use its reasonable best efforts to list all such Registrable Securities covered by such registration on each securities exchange and automated inter-dealer quotation system on which a class of common equity securities of VMware is then listed;

(h) to the extent reasonably requested by the lead or managing underwriters, send appropriate officers of VMware to attend any “road shows” scheduled in connection with any such registration, with all out-of-pocket costs and expense incurred by VMware or such officers in connection with such attendance to be paid by VMware;

(i) furnish or cause to be furnished for delivery in connection with the closing of any offering of Registrable Securities pursuant to a registration effected pursuant to Section 3.1 or Section 3.2 unlegended certificates representing ownership of the Registrable Securities being sold in such denominations as shall be requested by the Selling Holders or the underwriters; and

(j) use its reasonable best efforts to take all other reasonable and customary steps typically taken by issuers to effect the registration and disposition of such Registrable Securities as contemplated hereby.

Section 3.7 Obligations of Selling Holders. Each Selling Holder agrees by having its securities treated as Registrable Securities hereunder that, upon receipt of written notice from VMware specifying that the prospectus relating to a registration made pursuant to Section 3.1 or Section 3.2 contains an untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading due to the occurrence of any event, such Selling Holder will forthwith discontinue disposition of Registrable Securities until such Selling Holder is advised by VMware that the use of the prospectus may be resumed and is furnished with a supplemented or amended prospectus as contemplated by Section 3.6(f), and, if so directed by VMware, such Selling Holder will deliver to VMware all copies of the prospectus covering such Registrable Securities then in such Selling Holder’s possession at the time of receipt of such notice.

Section 3.8 Underwriting; Due Diligence.

(a) If requested by the underwriters for any Underwritten Offering of Registrable Securities pursuant to a registration requested under this ARTICLE III, VMware shall enter into an underwriting agreement in a form reasonably satisfactory to VMware with such underwriters for such offering, which agreement will contain such representations and warranties by VMware and such other terms and provisions as are customarily contained in underwriting agreements with respect to secondary distributions, including, without limitation, indemnification and contribution provisions substantially to the effect and to the extent provided in Section 3.9, and agreements as to the provision of opinions of counsel and accountants’ letters to the effect and to the extent provided in Section 3.6(e). The Selling Holders on whose behalf the Registrable Securities are to be distributed by such underwriters shall be a party to any

such underwriting agreement and the representations and warranties by, and the other agreements on the part of, VMware to and for the benefit of such underwriters, shall also be made to and for the benefit of such Selling Holders. Such underwriting agreement shall also contain such representations and warranties by such Selling Holders and such other terms and provisions as are customarily contained in underwriting agreements with respect to secondary distributions, including, without limitation, indemnification and contribution provisions substantially to the effect and to the extent provided in Section 3.9.

(b) In connection with the preparation and filing of each registration statement registering Registrable Securities under the Securities Act pursuant to this ARTICLE III, VMware shall give the Holders of such Registrable Securities and the underwriters, if any, and their respective counsel and accountants, such reasonable and customary access to its books and records and such opportunities to discuss the business of VMware with its officers and the independent public accountants who have certified the financial statements of VMware as shall be necessary, in the opinion of such Holders and such underwriters or their respective counsel, to conduct a reasonable investigation within the meaning of the Securities Act; *provided, however*, that such Holders and the underwriters and their respective counsel and accountants shall use their reasonable best efforts to coordinate any such investigation of the books and records of VMware and any such discussions with VMware's officers and accountants so that all such investigations occur at the same time and all such discussions occur at the same time.

Section 3.9 Indemnification and Contribution.

(a) In the case of each offering of Registrable Securities made pursuant to this ARTICLE III, VMware agrees to indemnify and hold harmless, to the extent permitted by law, each Selling Holder, each underwriter of Registrable Securities so offered and each Person, if any, who controls any of the foregoing Persons within the meaning of the Securities Act and the officers, directors, affiliates, employees and agents of each of the foregoing, against any and all Losses, joint or several, to which they or any of them may become subject, under the Securities Act or otherwise, including any amount paid in settlement of any litigation commenced or threatened, insofar as such Losses (or actions or proceedings in respect thereof, whether or not such indemnified Person is a party thereto) arise out of or are based upon any untrue statement by VMware or alleged untrue statement by VMware of a material fact contained in the registration statement (or in any preliminary or final prospectus included therein or issuer free writing prospectus related thereto) or in any offering memorandum or other offering document relating to the offering and sale of such Registrable Securities prepared by VMware or at its direction, or any amendment thereof or supplement thereto, or in any document incorporated by reference therein, or any omission by VMware or alleged omission by VMware to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading; *provided, however*, that VMware shall not be liable to any Person in any such case to the extent that any such Loss arises out of or relates to any untrue statement or alleged untrue statement, or any omission, if such statement or omission shall have been made in reliance upon and in conformity with information

furnished to VMware in writing by or on behalf of such Selling Holder, any other holder of securities whose securities are included in such registration statement or any such underwriter, as the case may be, specifically for use in the registration statement (or in any preliminary or final prospectus included therein or issuer free writing prospectus related thereto), offering memorandum or other offering document, or any amendment thereof or supplement thereto. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of any Selling Holder or any other holder and shall survive the transfer of such securities. The foregoing indemnity agreement is in addition to any liability that VMware may otherwise have to each Selling Holder, or other holder or underwriter of the Registrable Securities or any controlling person of the foregoing and the officers, directors, affiliates, employees and agents of each of the foregoing; *provided, however*, that, in the case of an offering with respect to which a Selling Holder has designated the lead or managing underwriters (or a Selling Holder is offering Registrable Securities directly, without an underwriter), this indemnity does not apply to any Loss arising out of or relating to any untrue statement or alleged untrue statement or omission or alleged omission in any preliminary prospectus or offering memorandum if a copy of a final prospectus or offering memorandum was not sent or given by or on behalf of any underwriter (or such Selling Holder or other holder, as the case may be) to such Person asserting such Loss at or prior to the written confirmation of the sale of the Registrable Securities as required by the Securities Act and such untrue statement or omission had been corrected in such final prospectus or offering memorandum.

(b) In the case of each offering made pursuant to this Agreement, each Selling Holder, by exercising its registration rights hereunder, agrees to indemnify and hold harmless, and to cause each underwriter of Registrable Securities included in such offering to agree to indemnify and hold harmless to the extent permitted by law, VMware, each other underwriter who participates in such offering, each other Selling Holder or other holder with securities included in such offering and in the case of an underwriter, such Selling Holder or other holder, and each Person, if any, who controls any of the foregoing within the meaning of the Securities Act and the officers, directors, affiliates, employees and agents of each of the foregoing, against any and all Losses, joint or several, to which they or any of them may become subject, under the Securities Act or otherwise, including any amount paid in settlement of any litigation commenced or threatened, insofar as such Losses (or actions or proceedings in respect thereof, whether or not such indemnified Person is a party thereto) arise out of or are based upon any untrue statement or alleged untrue statement by such Selling Holder or underwriter, as the case may be, of a material fact contained in the registration statement (or in any preliminary or final prospectus included therein or issuer free writing prospectus related thereto) or in any offering memorandum or other offering document relating to the offering and sale of such Registrable Securities prepared by VMware or at its direction, or any amendment thereof or supplement thereto, or in any document incorporated by reference therein, or any omission by such Selling Holder or underwriter, as the case may be, or alleged omission by such Selling Holder or underwriter, as the case may be, to state therein a material fact required to be stated therein or necessary to make the statements

therein not misleading, but in each case only to the extent that such statement or omission shall have been made in reliance on or in conformity with information furnished to VMware in writing by or on behalf of such Selling Holder or underwriter, as the case may be, specifically for use in such registration statement (or in any preliminary or final prospectus included therein or issuer free writing prospectus related thereto), offering memorandum or other offering document or any amendment thereof or supplement thereto. The foregoing indemnity is in addition to any liability which such Selling Holder or underwriter, as the case may be, may otherwise have to VMware, or controlling persons and the officers, directors, affiliates, employees, and agents of each of the foregoing; *provided, however*, that, in the case of an offering made pursuant to this Agreement with respect to which VMware has designated the lead or managing underwriters (or VMware is offering securities directly, without an underwriter), this indemnity does not apply to any Loss arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission in any preliminary prospectus or offering memorandum if a copy of a final prospectus or offering memorandum was not sent or given by or on behalf of any underwriter (or VMware, as the case may be) to such Person asserting such Loss at or prior to the written confirmation of the sale of the Registrable Securities as required by the Securities Act and such untrue statement or omission had been corrected in such final prospectus or offering memorandum.

(c) Each party indemnified under paragraph (a) or (b) above shall, promptly after receipt of notice of a claim or action against such indemnified party in respect of which indemnity may be sought hereunder, notify the indemnifying party in writing of the claim or action; *provided, however*, that the failure to notify the indemnifying party shall not relieve it from any liability that it may have to an indemnified party on account of the indemnity agreement contained in paragraph (a) or (b) above except to the extent that the indemnifying party was actually prejudiced by such failure, and in no event shall such failure relieve the indemnifying party from any other liability that it may have to such indemnified party. If any such claim or action shall be brought against an indemnified party, and it shall have notified the indemnifying party thereof, unless in such indemnified party's reasonable judgment a conflict of interest between such indemnified party and indemnifying parties may exist in respect of such claim, the indemnifying party shall be entitled to participate therein, and, to the extent that it wishes, jointly with any other similarly notified indemnifying party, to assume the defense thereof with counsel satisfactory to the indemnified party. After notice from the indemnifying party to the indemnified party of its election to assume the defense of such claim or action, the indemnifying party shall not be liable to the indemnified party under this Section 3.9 for any legal or other expenses subsequently incurred by the indemnified party in connection with the defense thereof other than reasonable costs of investigation. Any indemnifying party against whom indemnity may be sought under this Section 3.9 shall not be liable to indemnify an indemnified party if such indemnified party settles such claim or action without the consent of the indemnifying party. The indemnifying party may not agree to any settlement of any such claim or action, other than solely for monetary damages for which the indemnifying party

shall be responsible hereunder, the result of which any remedy or relief shall be applied to or against the indemnified party, without the prior written consent of the indemnified party, which consent shall not be unreasonably withheld. In any action hereunder as to which the indemnifying party has assumed the defense thereof with counsel satisfactory to the indemnified party, the indemnified party shall continue to be entitled to participate in the defense thereof, with counsel of its own choice, but the indemnifying party shall not be obligated hereunder to reimburse the indemnified party for the costs thereof.

(d) If the indemnification provided for in this Section 3.9 shall for any reason be unavailable (other than in accordance with its terms) to an indemnified party in respect of any Loss referred to therein, then each indemnifying party shall, in lieu of indemnifying such indemnified party, contribute to the amount paid or payable by such indemnified party as a result of such Loss (i) as between VMware and the Selling Holders on the one hand and the underwriters on the other, in such proportion as shall be appropriate to reflect the relative benefits received by VMware and the Selling Holders on the one hand and the underwriters on the other hand or, if such allocation is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits but also the relative fault of VMware and the Selling Holders on the one hand and the underwriters on the other with respect to the statements or omissions which resulted in such Loss as well as any other relevant equitable considerations and (ii) as between VMware on the one hand and each Selling Holder on the other, in such proportion as is appropriate to reflect the relative fault of VMware and of each Selling Holder in connection with such statements or omissions as well as any other relevant equitable considerations. The relative benefits received by VMware and the Selling Holders on the one hand and the underwriters on the other shall be deemed to be in the same proportion as the total proceeds from the offering (net of underwriting discounts and commissions but before deducting expenses) received by VMware and the Selling Holders bear to the total underwriting discounts and commissions received by the underwriters, in each case as set forth in the table on the cover page of the prospectus. The relative fault of VMware and the Selling Holders on the one hand and of the underwriters on the other shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by VMware and the Selling Holders or by the underwriters. The relative fault of VMware on the one hand and of each Selling Holder on the other shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by such party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission, but not by reference to any indemnified party's stock ownership in VMware. The amount paid or payable by an indemnified party as a result of the Loss, or action in respect thereof, referred to above in this paragraph (d) shall be deemed to include, for purposes of this paragraph (d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. VMware and the Selling Holders agree that it would not be just and equitable if contribution pursuant to this Section 3.9 were determined by

pro rata allocation (even if the underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to in this paragraph. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(e) Notwithstanding any other provision of this Section 3.9, the obligation to indemnify or contribute shall be several, and not joint, among the Selling Holders who furnished or failed to furnish the information in a registration statement (or in any preliminary or final prospectus included therein or issuer free writing prospectus related thereto) or in any offering memorandum or other offering document relating to the offering and sale of Registrable Securities that resulted in any Loss. The liability of each such Selling Holder shall be limited to such Selling Holder's proportionate amount of the aggregate gross proceeds received by all such Selling Holders from the sale of such Registrable Securities and shall not in any event exceed the gross proceeds received by such Selling Holder from such sale.

(f) Indemnification and contribution similar to that specified in the preceding paragraphs of this Section 3.9 (with appropriate modifications) shall be given by VMware, the Selling Holders and any underwriters with respect to any required registration or other qualification of securities under any state law or regulation or Governmental Authority.

(g) The obligations of the parties under this Section 3.9 shall be in addition to any liability which any party may otherwise have to any other party.

Section 3.10 Rule 144 and Form S-3. VMware shall use its reasonable best efforts to ensure that the conditions to the availability of Rule 144 set forth in paragraph (c) thereof shall be satisfied. Upon the request of any Holder of Registrable Securities, VMware will deliver to such Holder a written statement as to whether it has complied with such requirements. VMware further agrees to use its reasonable best efforts to cause all conditions to the availability of Form S-3 (or any successor form) under the Securities Act for the filing of registration statements under this Agreement to be met.

Section 3.11 Holdback Agreement.

(a) If so requested by the Underwriters' Representative in connection with an offering of securities covered by a registration statement filed by VMware, whether or not Registrable Securities of the Holders are included therein, each Holder shall agree not to effect any sale or distribution of the Shares, including any sale under Rule 144, without the prior written consent of the Underwriters' Representative (otherwise than through the registered public offering then being made), within seven (7) days prior to or ninety (90) days (or such lesser period as the Underwriters' Representative may permit) after the Effective Date of the registration statement (or the commencement of the offering to the public of such Registrable Securities in the case of Rule 415 Offerings). The Holders shall not be subject to the restrictions set forth in this

Section 3.11 for longer than an aggregate of ninety-seven (97) days during any 12-month period.

(b) If so requested by the Underwriters' Representative in connection with an offering of any Registrable Securities, VMware shall agree not to effect any sale or distribution of VMware Capital Stock, without the prior written consent of the Underwriters' Representative (otherwise than through the registered public offering then being made or in connection with any acquisition or business combination transaction and other than in connection with stock options and employee benefit plans and compensation), within seven (7) days prior to or ninety (90) days (or such lesser period as the Underwriters' Representative may permit) after the Effective Date of the registration statement (or the commencement of the offering to the public of such Registrable Securities in the case of Rule 415 Offerings) and shall use its reasonable best efforts to obtain and enforce similar agreements from any other Persons if requested by the Underwriters' Representative; *provided, however*, that VMware or such Persons shall not be subject to the restrictions set forth in this Section 3.11 for longer than an aggregate of ninety-seven (97) days during any twelve (12) month period.

(c) Notwithstanding anything else in this Section 3.11 to the contrary, no Holder shall be precluded from distributing to any or all of its stockholders any or all of the Registrable Securities.

Section 3.12 Term . This ARTICLE III shall remain in effect until all Registrable Securities held by Holders have been transferred by them to other Persons.

ARTICLE IV MUTUAL RELEASES; INDEMNIFICATION

Section 4.1 Release of Pre-IPO Date Claims .

(a) **VMware Release** . Except as provided in Section 4.1(c), as of the IPO Date, VMware does hereby, for itself and as agent for each member of the VMware Group, remise, release and forever discharge the Dell Technologies Indemnitees from any and all Liabilities whatsoever, whether at law or in equity (including any right of contribution), whether arising under any contract or agreement, by operation of law or otherwise, existing or arising from any past acts or events occurring or failing to occur or alleged to have occurred or to have failed to occur or any conditions existing or alleged to have existed on or before the IPO Date, including in connection with the transactions and all other activities to implement the IPO.

(b) **Dell Technologies Release** . Except as provided in Section 4.1(c), as of the IPO Date, Dell Technologies does hereby, for itself and as agent for each member of the Dell Technologies Group, remise, release and forever discharge the VMware Indemnitees from any and all Liabilities whatsoever, whether at law or in equity (including any right of contribution), whether arising under any contract or agreement, by operation of law or otherwise, existing or arising from any past acts or events occurring or failing to occur or alleged to have occurred or to have failed to occur or any conditions existing or alleged to have existed on or before the IPO Date, including in connection with the transactions and all other activities to implement the IPO.

(c) No Impairment . Nothing contained in Section 4.1(a) or Section 4.1(b) shall limit or otherwise affect any Party's rights or obligations pursuant to or contemplated by this Agreement or any Inter-Company Agreement, in each case in accordance with its terms, including, without limitation, any obligations relating to indemnification, including indemnification pursuant to Section 4.2 and Section 4.3, and any Insurance Proceeds under any of Dell Technologies' Insurance Policies relating to the VMware Business which VMware is entitled to be paid.

(d) No Actions as to Released Pre-IPO Date Claims . VMware agrees, for itself and as agent for each member of the VMware Group, not to make any claim or demand, or commence any Action asserting any claim or demand, including any claim of contribution or any indemnification, against Dell Technologies or any member of the Dell Technologies Group, or any other Person released pursuant to Section 4.1(a), with respect to any Liabilities released pursuant to Section 4.1(a). Dell Technologies agrees, for itself and as agent for each member of the Dell Technologies Group, not to make any claim or demand, or commence any Action asserting any claim or demand, including any claim of contribution or any indemnification, against VMware or any member of the VMware Group, or any other Person released pursuant to Section 4.1(b), with respect to any Liabilities released pursuant to Section 4.1(b).

(e) Further Instruments . At any time, at the request of any other Party, each Party shall cause each member of its respective Dell Technologies Group or VMware Group, as applicable, to execute and deliver releases reflecting the provisions hereof.

Section 4.2 Indemnification by VMware . Except as otherwise provided in this Agreement, VMware shall, for itself and as agent for each member of the VMware Group, indemnify, defend (or, where applicable, pay the defense costs for) and hold harmless the Dell Technologies Indemnitees from and against, and shall reimburse such Dell Technologies Indemnitees with respect to, any and all Losses that any third party seeks to impose upon the Dell Technologies Indemnitees, or which are imposed upon the Dell Technologies Indemnitees, and that relate to, arise or result from, whether prior to or following the IPO Date, any of the following items (without duplication):

(a) any VMware Liability;

(b) any breach by VMware or any member of the VMware Group of this Agreement or any of the Inter-Company Agreements; and

(c) any Liabilities relating to, arising out of or resulting from any untrue statement or alleged untrue statement of a material fact or omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, with respect to all information (i) contained in the IPO Registration Statement, any issuer free writing prospectus or any preliminary, final or supplemental prospectus forming a part of the IPO Registration Statement (other than information provided by Dell Technologies to VMware specifically for inclusion in the IPO Registration Statement, any issuer free writing prospectus or any preliminary, final or supplemental prospectus forming a part of the IPO Registration Statement), (ii)

contained in any public filings made by VMware with the Commission following the IPO Date and (iii) provided by VMware to Dell Technologies specifically for inclusion in Dell Technologies' annual or quarterly reports following the IPO Date to the extent (A) such information pertains to (x) VMware and the VMware Group or (y) the VMware Business or (B) Dell Technologies has provided prior written notice to VMware that such information will be included in one or more annual or quarterly reports, specifying how such information will be presented, and the information is included in such annual or quarterly reports, provided that this sub-clause (B) shall not apply to the extent that any such Liability arises out of or results from, or in connection with, any action or inaction of any member of the Dell Technologies Group, including as a result of any misstatement or omission of any information by any member of the Dell Technologies Group to VMware.

(d) In the event that any member of the VMware Group makes a payment to the Dell Technologies Indemnites hereunder, and any of the Dell Technologies Indemnites subsequently diminishes the Liability on account of which such payment was made, either directly or through a third-party recovery (other than a recovery indirectly from Dell Technologies), Dell Technologies will promptly repay (or will procure an applicable Dell Technologies Indemnitee to promptly repay) such member of the VMware Group the amount by which the payment made by such member of the VMware Group exceeds the actual cost of the associated indemnified Liability.

Section 4.3 Indemnification by Dell Technologies . Except as otherwise provided in this Agreement, Dell Technologies shall, for itself and as agent for each member of the Dell Technologies Group, indemnify, defend (or, where applicable, pay the defense costs for) and hold harmless the VMware Indemnites from and against, and shall reimburse such VMware Indemnitee with respect to, any and all Losses that any third party seeks to impose upon the VMware Indemnites, or which are imposed upon the VMware Indemnites, and that relate to, arise or result from, whether prior to or following the IPO Date, with any of the following items (without duplication):

(a) any Liability of the Dell Technologies Group and all Liabilities arising out of the operation or conduct of the Dell Technologies Business (in each case excluding the VMware Liabilities);

(b) any breach by Dell Technologies or any member of the Dell Technologies Group of this Agreement or any of the Inter-Company Agreements; and

(c) any Liabilities relating to, arising out of or resulting from any untrue statement or alleged untrue statement of a material fact or omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, with respect to all information (i) contained in the IPO Registration Statement, any issuer free writing prospectus or any preliminary, final or supplemental prospectus forming a part of the IPO Registration Statement provided by Dell Technologies specifically for inclusion therein to the extent such information pertains to (x) Dell Technologies and the Dell Technologies Group or (y) the Dell Technologies Business and (ii) provided by Dell Technologies to VMware specifically for inclusion in VMware's annual or quarterly reports following the IPO Date to the extent

(A) such information pertains to (x) Dell Technologies and the Dell Technologies Group or (y) the Dell Technologies Business or (B) VMware has provided prior written notice to Dell Technologies that such information will be included in one or more annual or quarterly reports, specifying how such information will be presented, and the information is included in such annual or quarterly reports, provided that this sub-clause (B) shall not apply to the extent that any such Liability arises out of or results from, or in connection with, any action or inaction of any member of the VMware Group, including as a result of any misstatement or omission of any information by any member of the VMware Group to Dell Technologies.

(d) In the event that any member of the Dell Technologies Group makes a payment to the VMware Indemnitees hereunder, and any of the VMware Indemnitees subsequently diminishes the Liability on account of which such payment was made, either directly or through a third-party recovery (other than a recovery indirectly from VMware), VMware will promptly repay (or will procure an applicable VMware Indemnatee to promptly repay) such member of the Dell Technologies Group the amount by which the payment made by such member of the Dell Technologies Group exceeds the actual cost of the indemnified Liability.

Section 4.4 Ancillary Agreement Liabilities . Notwithstanding any other provision in this Agreement to the contrary, any Liability specifically assumed by, or allocated to, a Party in any of the Inter-Company Agreements shall be governed exclusively by the terms of such Inter-Company Agreement.

Section 4.5 Other Agreements Evidencing Indemnification Obligations . Dell Technologies hereby agrees to execute, for the benefit of any VMware Indemnatee, such documents as may be reasonably requested by such VMware Indemnatee, evidencing Dell Technologies' agreement that the indemnification obligations of Dell Technologies set forth in this Agreement inure to the benefit of and are enforceable by such VMware Indemnatee. VMware hereby agrees to execute, for the benefit of any Dell Technologies Indemnatee, such documents as may be reasonably requested by such Dell Technologies Indemnatee, evidencing VMware's agreement that the indemnification obligations of VMware set forth in this Agreement inure to the benefit of and are enforceable by such Dell Technologies Indemnatee.

Section 4.6 Reductions for Insurance Proceeds and other Recoveries .

(a) **Insurance Proceeds** . The amount that any Indemnifying Party is or may be required to provide indemnification to or on behalf of any Indemnatee pursuant to Section 4.2 or Section 4.3, as applicable, shall be reduced (retroactively or prospectively) by any Insurance Proceeds or other amounts actually recovered from third parties by or on behalf of such Indemnatee in respect of the related Loss. The existence of a claim by an Indemnatee for monies from an insurer or against a third party in respect of any indemnifiable Loss shall not, however, delay any payment pursuant to the indemnification provisions contained herein and otherwise determined to be due and owing by an Indemnifying Party. Rather, the Indemnifying Party shall make payment in full of the amount determined to be due and owing by it against an assignment by the Indemnatee to the Indemnifying Party of the entire claim of the Indemnatee for Insurance

Proceeds or against such third party. Notwithstanding any other provisions of this Agreement, it is the intention of the Parties that no insurer or any other third party shall be (i) entitled to a benefit it would not be entitled to receive in the absence of the foregoing indemnification provisions, or (ii) relieved of the responsibility to pay any claims for which it is obligated. If an Indemnitee has received the payment required by this Agreement from an Indemnifying Party in respect of any indemnifiable Loss and later receives Insurance Proceeds or other amounts in respect of such indemnifiable Loss, then such Indemnitee shall hold such Insurance Proceeds or other amounts in trust for the benefit of the Indemnifying Party (or Indemnifying Parties) and shall pay to the Indemnifying Party, as promptly as practicable after receipt, a sum equal to the amount of such Insurance Proceeds or other amounts received, up to the aggregate amount of any payments received from the Indemnifying Party pursuant to this Agreement in respect of such indemnifiable Loss (or, if there is more than one Indemnifying Party, the Indemnitee shall pay each Indemnifying Party, its proportionate share (based on payments received from the Indemnifying Parties) of such Insurance Proceeds).

(b) Tax Cost/Tax Benefit . The amount that any Indemnifying Party is or may be required to provide indemnification to or on behalf of any Indemnitee pursuant to Section 4.2 or Section 4.3, as applicable, shall be (i) increased to take account of any net Tax cost incurred by the Indemnitee arising from the receipt or accrual of an indemnification payment hereunder (grossed up for such increase) and (ii) reduced to take account of any net Tax benefit realized by the Indemnitee arising from incurring or paying such loss or other liability. In computing the amount of any such Tax cost or Tax benefit, the Indemnitee shall be deemed to recognize all other items of income, gain, loss, deduction or credit before recognizing any item arising from the receipt or accrual of any indemnification payment hereunder or incurring or paying any indemnified Loss. Any indemnification payment hereunder shall initially be made without regard to this Section 4.6(b) and shall be increased or reduced to reflect any such net Tax cost (including gross-up) or net Tax benefit only after the Indemnitee has actually realized such cost or benefit. For purposes of this Agreement, an Indemnitee shall be deemed to have “actually realized” a net Tax cost or a net Tax benefit to the extent that, and at such time as, the amount of Taxes payable by such Indemnitee is increased above or reduced below, as the case may be, the amount of Taxes that such Indemnitee would be required to pay but for the receipt or accrual of the indemnification payment or the incurrence or payment of such Loss, as the case may be. The amount of any increase or reduction hereunder shall be adjusted to reflect any Final Determination (as defined in the Tax Sharing Agreement) with respect to the Indemnitee's liability for Taxes, and payments between such indemnified parties to reflect such adjustment shall be made if necessary. Notwithstanding any other provision of this Agreement, to the extent permitted by applicable law, the Parties hereto agree that any indemnity payment made hereunder shall be treated as a capital contribution or dividend distribution, as the case may be, immediately prior to the IPO Date and, accordingly, not includible in the taxable income of the recipient or deductible by the payor.

Section 4.7 Procedures for Defense, Settlement and Indemnification of the Third Party Claims .

(a) Notice of Claims . If an Indemnitee shall receive notice or otherwise learn of the assertion by a Person (including any Governmental Authority) who is not a member of the Dell Technologies Group or the VMware Group of any claim or of the commencement by any such Person of any Action (collectively, a “ **Third Party Claim** ”) with respect to which an Indemnifying Party may be obligated to provide indemnification, Dell Technologies and VMware (as applicable) will ensure that such Indemnitee shall give such Indemnifying Party written notice thereof within thirty (30) days after becoming aware of such Third Party Claim. Any such notice shall describe the Third Party Claim in reasonable detail. Notwithstanding the foregoing, the delay or failure of any Indemnitee or other Person to give notice as provided in this Section 4.7 shall not relieve the related Indemnifying Party of its obligations under this ARTICLE IV, except to the extent that such Indemnifying Party is actually and substantially prejudiced by such delay or failure to give notice.

(b) Defense by Indemnifying Party . An Indemnifying Party shall be entitled to participate in the defense of any Third Party Claim and, to the extent that it wishes, at its cost, risk and expense, to assume the defense thereof, with counsel reasonably satisfactory to the party seeking indemnification. After timely notice from the Indemnifying Party to the Indemnitee of such election to so assume the defense thereof, the Indemnifying Party shall not be liable to the party seeking indemnification for any legal expenses of other counsel or any other expenses subsequently incurred by Indemnitee in connection with the defense thereof. The Indemnitee agrees to cooperate in all reasonable respects with the Indemnifying Party and its counsel in the defense against any Third Party Claim. The Indemnifying Party shall be entitled to compromise or settle any Third Party Claim as to which it is providing indemnification, which compromise or settlement shall be made only with the written consent of the Indemnitee, such consent not to be unreasonably withheld.

(c) Defense by Indemnitee . If an Indemnifying Party fails to assume the defense of a Third Party Claim within thirty (30) calendar days after receipt of notice of such claim, Indemnitee will, upon delivering notice to such effect to the Indemnifying Party, have the right to undertake the defense, compromise or settlement of such Third Party Claim on behalf of and for the account of the Indemnifying Party subject to the limitations as set forth in this Section 4.7; provided, however, that such Third Party Claim shall not be compromised or settled without the written consent of the Indemnifying Party, which consent shall not be unreasonably withheld. If the Indemnitee assumes the defense of any Third Party Claim, it shall keep the Indemnifying Party reasonably informed of the progress of any such defense, compromise or settlement. The Indemnifying Party shall reimburse all such costs and expenses of the Indemnitee in the event it is ultimately determined that the Indemnifying Party is obligated to indemnify the Indemnitee with respect to such Third Party Claim. In no event shall an Indemnifying Party be liable for any settlement effected without its consent, which consent will not be unreasonably withheld.

Section 4.8 Additional Matters .

(a) Cooperation in Defense and Settlement . With respect to any Third Party Claim that implicates both VMware and Dell Technologies in a material fashion due to the allocation of Liabilities, responsibilities for management of defense and related indemnities set forth in this Agreement or any of the Inter-Company Agreements, the Parties agree to cooperate fully and maintain a joint defense (in a manner that will preserve the attorney-client privilege, joint defense or other privilege with respect thereto) so as to minimize such Liabilities and defense costs associated therewith. The Party that is not responsible for managing the defense of such Third Party Claims shall, upon reasonable request, be consulted with respect to significant matters relating thereto and may, if necessary or helpful, associate counsel to assist in the defense of such claims.

(b) Pre-IPO Date Actions . Except with respect to matters pertaining solely to, or solely in connection with, the VMware Business, Dell Technologies may, in its sole discretion, have exclusive authority and control over the investigation, prosecution, defense and appeal of all Actions pending at the IPO Date relating to or arising in connection with, in any manner, the VMware assets or the VMware Liabilities if Dell Technologies or a member of the Dell Technologies Group is named as a party thereto; provided, however, that Dell Technologies must obtain the written consent of VMware, such consent not to be unreasonably withheld, to settle or compromise or consent to the entry of judgment with respect to such Action. After any such compromise, settlement, consent to entry of judgment or entry of judgment, Dell Technologies shall reasonably and fairly allocate to VMware and VMware shall be responsible for VMware's proportionate share of any such compromise, settlement, consent or judgment attributable to the VMware Business, the VMware assets or the VMware Liabilities, including its proportionate share of the costs and expenses associated with defending same.

(c) Substitution . In the event of an Action in which the Indemnifying Party is not a named defendant, if either the Indemnitee or the Indemnifying Party shall so request, the Parties shall endeavor to substitute the Indemnifying Party for the named defendant. If such substitution or addition cannot be achieved for any reason or is not requested, the rights and obligations of the Parties regarding indemnification and the management of the defense of claims as set forth in this ARTICLE IV shall not be altered.

(d) Subrogation . In the event of payment by or on behalf of any Indemnifying Party to or on behalf of any Indemnitee in connection with any Third Party Claim, such Indemnifying Party shall be subrogated to and shall stand in the place of such Indemnitee, in whole or in part based upon whether the Indemnifying Party has paid all or only part of the Indemnitee's Liability, as to any events or circumstances in respect of which such Indemnitee may have any right, defense or claim relating to such Third Party Claim against any claimant or plaintiff asserting such Third Party Claim or against any other person. Such Indemnitee shall cooperate with such Indemnifying Party in a

reasonable manner, and at the cost and expense of such Indemnifying Party, in prosecuting any subrogated right, defense or claim.

Section 4.9 Survival of Indemnities . Subject to Section 4.5, the rights and obligations of the members of the Dell Technologies Group and the VMware Group under this ARTICLE IV shall survive the sale or other transfer by any Party of any assets or businesses or the assignment by it of any Liabilities or the sale by any member of the Dell Technologies Group or the VMware Group of the capital stock or other equity interests of any Subsidiary to any Person.

ARTICLE V OPTION

Section 5.1 Option.

(a) Subject to the provisions of subsection (b) of this Section 5.1, VMware hereby grants to Dell Technologies, on the terms and conditions set forth herein, a continuing right (the “**Option**”) to purchase from VMware, at the times set forth herein, such number of shares of Class A common stock for Dell Technologies to maintain the Class A Ownership Percentage and such number of shares of Class B common stock as is necessary for Dell Technologies to maintain the Class B Ownership Percentage. The Option shall be assignable, in whole or in part and from time to time, by Dell Technologies to any member of the Dell Technologies Group.

(i) The exercise price for each share of Class A common stock purchased pursuant to an exercise of the Option shall be:

(A) in the event of the issuance by VMware of Class A common stock in exchange for cash consideration, the per share price paid to VMware for shares of the Class A common stock issued by VMware in the related Issuance Event; or

(B) in the event of: (1) the issuance by VMware of Class A common stock pursuant to any stock option or other executive or employee benefit or compensation plan maintained by VMware or (2) the issuance by VMware of Class A common stock for consideration other than cash, the Fair Market Value per share of Class A common stock on the Issuance Event Date; and

(ii) The exercise price for each share of Class B common stock purchased pursuant to an exercise of the Option shall be the Fair Market Value per share of Class B common stock on the Issuance Event Date.

For the purposes of this Section 5.1, “**Fair Market Value**” of a share of (x) Class A common stock means the closing price per share of Class A common stock as quoted on the NYSE on the date for which a determination is being made and (y) Class B common stock shall be the fair market value per share of Class B common stock as determined in good faith by VMware’s board of directors.

(b) The provisions of Section 5.1(a) notwithstanding, the Option granted pursuant to Section 5.1(a) shall not apply and shall not be exercisable in connection with the issuance by VMware of any shares of Common Stock pursuant to

any stock option or other executive or employee benefit or compensation plan maintained by VMware except where the issuance of such Common Stock pursuant to this clause (ii) would cause the Ownership Percentage to fall below eighty and one-tenth percent (80.1%).

Section 5.2 Notice. At least 20 business days prior to the issuance of any shares of Common Stock (other than in connection with the issuance by VMware of any shares of Common Stock pursuant to any stock option or other executive or employee benefit or compensation plan maintained by VMware and other than issuances of Common Stock to any member of the Dell Technologies Group) or the first date on which any event could occur that, in the absence of a full or partial exercise of the Option, would result in a reduction in the Class A Ownership Percentage or the Class B Ownership Percentage, VMware will notify Dell Technologies in writing (an “**Option Notice**”) of its plans to issue any such shares or the date on which such event could first occur. Each Option Notice must specify the date on which VMware intends to issue such additional shares of Common Stock or on which such event could first occur (such issuance or event being referred to herein as an “**Issuance Event**” and the date of such issuance or event as an “**Issuance Event Date**”), the number of shares VMware intends to issue or may issue and the other terms and conditions of such Issuance Event.

Section 5.3 Option Exercise and Payment. The Option may be exercised by Dell Technologies (or any member of the Dell Technologies Group to which all or any part of the Option has been assigned) in connection with an Issuance Event (i) for a number of shares of Class A common stock equal to or less than the number of shares that are necessary for the Dell Technologies Group to maintain, in the aggregate, the then-current Class A Ownership Percentage and (ii) for a number of shares of Class B common stock equal to or less than the number of shares that are necessary for the Dell Technologies Group to maintain, in the aggregate, the then-current Class B Ownership Percentage. The Option may be exercised at any time after receipt of an applicable Option Notice and up to 3 business days prior to the applicable Issuance Event Date by the delivery to VMware of a written notice to such effect specifying (x) the number of shares of Class A common stock and the number of shares of Class B common stock to be purchased by Dell Technologies or any member of the Dell Technologies Group and (y) a determination of the exercise price for such shares. In the event of any such exercise of the Option, VMware will, on the applicable Issuance Event Date and simultaneously with the issuance of shares of Common Stock in the related Issuance Event, deliver to Dell Technologies (or any member of the Dell Technologies Group designated by Dell Technologies), against payment therefor, certificates (issued in the name of Dell Technologies or its permitted assignee hereunder) representing the shares of Class A common stock or Class B common stock being purchased upon such exercise. Payment for such shares shall be made by wire transfer or intrabank transfer of immediately-available funds to such account as shall be specified by VMware for the full purchase price for such shares.

Section 5.4 Effect of Failure to Exercise. Except as provided in Section 5.5, any failure by Dell Technologies to exercise the Option, or any exercise for less than all shares purchasable under the Option, in connection with any particular Issuance Event

shall not affect Dell Technologies' right to exercise the Option in connection with any subsequent Issuance Event, *provided, however*, that following such Issuance Event in connection with which Dell Technologies so failed to exercise such Option in full or in part, the Class A Ownership Percentage and the Class B Ownership Percentage shall be recalculated.

Section 5.5 Termination of Option. The Option, or any part thereof assigned to a member of the Dell Technologies Group other than Dell Technologies, shall terminate upon the earlier of (i) the Distribution Date, (ii) the first date that members of the Dell Technologies Group beneficially own shares of Common Stock representing less than eighty percent (80%) of the aggregate number of votes entitled to be cast by the holders of the Common Stock at an annual or special meeting of stockholders on matters other than the election of directors and (iii) in the event that the Option has been transferred, on such date that the Person to whom the Option, or such part thereof, has been transferred, ceases to be a member of the Dell Technologies Group.

ARTICLE VI MISCELLANEOUS

Section 6.1 Limitation of Liability. IN NO EVENT SHALL ANY MEMBER OF THE DELL TECHNOLOGIES GROUP OR VMWARE GROUP BE LIABLE TO ANY OTHER MEMBER OF THE DELL TECHNOLOGIES GROUP OR VMWARE GROUP FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, INCIDENTAL OR PUNITIVE DAMAGES OR LOST PROFITS, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY (INCLUDING NEGLIGENCE) ARISING IN ANY WAY OUT OF THIS AGREEMENT, WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; PROVIDED, HOWEVER, THAT THE FOREGOING LIMITATIONS SHALL NOT LIMIT EACH PARTY'S INDEMNIFICATION OBLIGATIONS FOR LIABILITIES AS SET FORTH IN THIS AGREEMENT OR IN ANY INTER-COMPANY AGREEMENT.

Section 6.2 Entire Agreement. This Agreement, the Inter-Company Agreements and the Exhibits and Schedules referenced or attached hereto and thereto, constitute the entire agreement between the Parties with respect to the subject matter hereof and thereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof and thereof.

Section 6.3 Governing Law and Jurisdiction. This Agreement, including the validity hereof and the rights and obligations of the Parties hereunder, shall be construed in accordance with and all Disputes hereunder shall be governed by the laws of the state of Delaware applicable to contracts made and to be performed entirely in such state (without giving effect to the conflicts of laws provisions thereof).

Section 6.4 Termination; Amendment. This Agreement and any applicable Inter-Company Agreements may be terminated or amended at any time by mutual consent of Dell Technologies and VMware, evidenced by an instrument in writing signed on behalf of each of the Parties. In the event of termination pursuant to this Section 6.4, no Party shall have any liability of any kind to the other Party. Except as otherwise

provided herein or required by the provisions hereof, this Agreement shall terminate on the date that is five years after the first date upon which the members of the Dell Technologies Group cease to own at least twenty percent (20%) of the then outstanding number of shares of Common Stock; *provided, however*, that the provisions of Section 2.6 shall survive for a period of seven (7) years after the termination of this Agreement and the provisions of Section 2.4, this ARTICLE VI and ARTICLE VII shall survive indefinitely after the termination of this Agreement.

Section 6.5 Notices. Notices, offers, requests or other communications required or permitted to be given by either party pursuant to the terms of this Agreement shall be given in writing to the respective Parties to the following addresses:

if to Dell Technologies or EMC:

Dell Inc.
One Dell Way, RR1-33
Round Rock, TX 78682
Attention: General Counsel

if to VMware:

VMware, Inc.
3401 Hillview Avenue
Palo Alto, CA 94304
Attention: General Counsel

or to such other address as the party to whom notice is given may have previously furnished to the other in writing as provided herein. All notices shall be sent by hand delivery, recognized overnight courier or, within the United States, may also be sent via certified mail, return receipt requested. All notices shall be deemed to have been given when received, if hand delivered; one working day after it is sent, if sent by recognized overnight courier; and three days after it is postmarked, if mailed first class mail or certified mail, return receipt requested, with postage prepaid.

Section 6.6 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed to be an original but all of which shall constitute one and the same agreement.

Section 6.7 Binding Effect; Assignment. This Agreement shall inure to the benefit of and be binding upon the Parties hereto and their respective legal representatives and successors, and nothing in this Agreement, express or implied, is intended to confer upon any other Person any rights or remedies of any nature whatsoever under or by reason of this Agreement. This Agreement may be enforced separately by each member of the Dell Technologies Group and each member of the VMware Group. Neither party may assign this Agreement or any rights or obligations hereunder, without the prior written consent of the other party, and any such assignment shall be void; *provided, however*, either party may assign this Agreement to a successor entity in conjunction with such party's reincorporation in another jurisdiction or into another business form.

Section 6.8 Severability. If any term or other provision of this Agreement or the Exhibits or Schedules attached hereto is determined by a court, administrative agency or arbitrator to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the Parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in an acceptable manner to the end that transactions contemplated hereby are fulfilled to the fullest extent possible.

Section 6.9 Failure or Indulgence not Waiver; Remedies Cumulative. No failure or delay on the part of either party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude other or further exercise thereof or of any other right. All rights and remedies existing under this Agreement or the Exhibits or Schedules attached hereto are cumulative to, and not exclusive of, any rights or remedies otherwise available.

Section 6.10 Authority. Each of the Parties hereto represents to the other that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other actions, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is a legal, valid and binding obligation, enforceable against it in accordance with its terms subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

Section 6.11 Interpretation. The headings contained in this Agreement, in any Exhibit or Schedule hereto and in the table of contents to this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. Any capitalized term used in any Exhibit or Schedule but not otherwise defined therein, shall have the meaning assigned to such term in this Agreement. When a reference is made in this Agreement to an Article or a Section, Exhibit or Schedule, such reference shall be to an Article or Section of, or an Exhibit or Schedule to, this Agreement unless otherwise indicated.

Section 6.12 Conflicting Agreements. None of the provisions of this Agreement are intended to supersede any provision in any Inter-Company Agreement or any other agreement with respect to the respective subject matters thereof. In the event of conflict between this Agreement and any Inter-Company Agreement or other agreement executed in connection herewith, the provisions of such other agreement shall prevail.

Section 6.13 Third Party Beneficiaries. None of the provisions of this Agreement shall be for the benefit of or enforceable by any third party, including any creditor of any Person. No such third party shall obtain any right under any provision of

this Agreement or shall by reasons of any such provision make any claim in respect of any Liability (or otherwise) against either Party hereto.

Section 6.14 Consent of Dell Technologies. Any consent of Dell Technologies pursuant to this Agreement or any of the Inter Company Agreements shall not be effective unless it is in writing and evidenced by the signature of the General Counsel of Dell Technologies (or such other person that the General Counsel has specifically authorized in writing to give such consent).

ARTICLE VII DEFINITIONS

Section 7.1 Defined Terms. The following capitalized terms shall have the meanings given to them in this Section 7.1:

“ **Action** ” means any demand, action, suit, countersuit, arbitration, inquiry, proceeding or investigation by or before any federal, state, local, foreign or international governmental authority or any arbitration or mediation tribunal, other than any demand, action, suit, countersuit, arbitration, inquiry, proceeding or investigation relating to Taxes.

“ **Administrative Services Agreement** ” means the Amended and Restated Administrative Services Agreement between the Parties of even date herewith, as it may be amended from time to time.

“ **Affiliated Company** ” of any Person means any entity that controls, is controlled by, or is under common control with such Person. As used herein, “control” means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such entity, whether through ownership of voting securities or other interests, by contract or otherwise.

“ **Agreement** ” means this Amended and Restated Master Transaction Agreement, together with the Schedules and Exhibits hereto, as the same may be amended from time to time in accordance with the provisions hereof.

“ **Blackout Period** ” has the meaning set forth in Section 3.4.

“ **Class A Applicable Stock** ” means at any time the (i) shares of Class A common stock owned by the Dell Technologies Group that are owned on the date of this Agreement, plus (ii) shares of Class A common stock purchased by the Dell Technologies Group pursuant to ARTICLE V of this Agreement, plus (iii) shares of Class A common stock that were issued to the Dell Technologies Group in respect of shares described in either clause (i) or clause (ii) in any reclassification, share combination, share subdivision, share dividend, share exchange, merger, consolidation or similar transaction or event.

“ **Class A common stock** ” means the Class A common stock, par value \$0.01 per share, of VMware.

“ **Class A Ownership Percentage** ” means, at any time, the fraction, expressed as a percentage and rounded to the nearest thousandth of a percent, whose numerator is the number of shares of the Class A Applicable Stock and whose denominator is the

aggregate number of outstanding shares of Class A common stock and Class B common stock of VMware; *provided, however*, that any shares of Common Stock issued by VMware in violation of its obligations under ARTICLE V of this Agreement shall not be deemed outstanding for the purpose of determining the Class A Ownership Percentage.

“ **Class B Applicable Stock** ” means at any time the (i) shares of Class B common stock owned by the Dell Technologies Group that are owned on the date of this Agreement, plus (ii) shares of Class B common stock purchased by the Dell Technologies Group pursuant to ARTICLE V of this Agreement, plus (iii) shares of Class B common stock that were issued to the Dell Technologies Group in respect of shares described in either clause (i) or clause (ii) in any reclassification, share combination, share subdivision, share dividend, share exchange, merger, consolidation or similar transaction or event.

“ **Class B common stock** ” means the Class B common stock, par value \$0.01 per share, of VMware.

“ **Class B Ownership Percentage** ” means, at any time, the fraction, expressed as a percentage and rounded to the nearest thousandth of a percent, whose numerator is the number of shares of the Class B Applicable Stock and whose denominator is the aggregate number of outstanding shares of Class A common stock and Class B common stock of VMware; *provided, however*, that any shares of Common Stock issued by VMware in violation of its obligations under ARTICLE V of this Agreement shall not be deemed outstanding for the purpose of determining the Class B Ownership Percentage.

“ **Code** ” means the Internal Revenue Code of 1986 (or any successor statute), as amended from time to time, and the regulations promulgated thereunder.

“ **Commission** ” means the Securities and Exchange Commission.

“ **Common Stock** ” means the Class A common stock and Class B common stock of VMware.

“ **Company Notice** ” has the meaning set forth in Section 3.2(a).

“ **Company Securities** ” has the meaning set forth in Section 3.2(b).

“ **Continuously Effective** ” with respect to a specified registration statement, means that such registration statement shall not cease to be effective and available for transfers of Registrable Securities in accordance with the method of distribution set forth therein for longer than five (5) business days during the period specified in the relevant provision of this Agreement.

“ **Contract** ” means any contract, agreement, lease, license, sales order, purchase order, instrument or other commitment that is binding on any Person or any part of its property under applicable law.

“ **Dell Technologies** ” has the meaning set forth in the preamble to this Agreement.

“ **Dell Technologies’ Auditors** ” has the meaning set forth in Section 2.3(a)(i).

“ **Dell Technologies Business** ” means any business that is then conducted by Dell Technologies and described in its periodic filings with the Commission, other than the VMware Business.

“ **Dell Technologies Group** ” means the affiliated group (within the meaning of Section 1504(a) of the Code), or similar group of entities as defined under corresponding provisions of the laws of other jurisdictions, of which Dell Technologies is the common parent corporation, and any corporation or other entity which may be, may have been or may become a member of such group from time to time, but excluding any member of the VMware Group.

“ **Dell Technologies Indemnitees** ” means Dell Technologies, each member of the Dell Technologies Group and each of their respective directors, officers and employees.

“ **Dell Technologies Securities** ” has the meaning set forth in Section 3.2(b) of this Agreement.

“ **Demand Registration** ” has the meaning set forth in Section 3.1(a).

“ **Demand Registration Statement** ” has the meaning set forth in Section 3.1(a).

“ **Dispute** ” has the meaning set forth in Section 2.10(a) of this Agreement.

“ **Dispute Resolution Commencement Date** ” has the meaning set forth in Section 2.10(a) of this Agreement.

“ **Distribution** ” means a distribution or transfer by Dell Technologies of the Class B Common Stock to Dell Technologies stockholders or security holders in connection with a transaction intended to qualify for non-recognition of gain and loss under Section 355 of the Internal Revenue Code of 1986, as amended or any corresponding provision of any successor statute.

“ **Distribution Date** ” means the date on which a Distribution occurs.

“ **Effective Date** ” means the date registration statement filed pursuant to ARTICLE III hereof is declared effective by the Commission.

“ **EMC** ” has the meaning set forth in the preamble to this Agreement.

“ **Exchange Act** ” means the Securities Exchange Act of 1934, as amended.

“ **Fair Market Value** ” has the meaning set forth in Section 5.1(a).

“ **Governmental Approvals** ” means any notices, reports or other filings to be made, or any consents, registrations, approvals, permits or authorizations to be obtained from, any Governmental Authority.

“ **Governmental Authority** ” means any federal, state, local, foreign or international court, government, department, commission, board, bureau, agency, official or other regulatory, administrative or governmental authority, or any arbitration or mediation tribunal or panel.

“ **Holders** ” means, collectively, Dell Technologies and its Affiliated Companies (other than VMware) who from time to time own Registrable Securities, each of such entities separately is sometimes referred to herein as a “ **Holder** .”

“**Indebtedness**” means, with respect to any Person, any liability of such Person in respect of borrowed money or evidenced by bonds, notes, debentures or similar instruments and shall also include (a) any liability of such Person under any agreement related to the fixing of interest rates on any Indebtedness and (b) any capitalized lease obligations of such Person (if and to the extent the same would appear on a balance sheet of such Person prepared in accordance with United States generally accepted accounting principles).

“**Indemnifying Party**” means any party which may be obligated to provide indemnification to an Indemnitee pursuant to Section 4.2 or Section 4.3 or any other section of this Agreement or any Inter-Company Agreement.

“**Indemnitee** ” means any party which may be entitled to indemnification from an Indemnifying Party pursuant to Section 4.2 or Section 4.3 or any other section of this Agreement or any Inter-Company Agreement.

“ **Information** ” means information, whether or not patentable or copyrightable, in written, oral, electronic or other tangible or intangible forms, stored in any medium, including studies, reports, records, books, contracts, instruments, surveys, discoveries, ideas, concepts, know-how, techniques, designs, specifications, drawings, blueprints, diagrams, models, prototypes, samples, flow charts, data, computer data, disks, diskettes, tapes, computer programs or other software, marketing plans, customer names, communications by or to attorneys (including attorney-client privileged communications), memos and other materials prepared by attorneys or under their direction (including attorney work product), and other technical, financial, employee or business information or data.

“ **Insurance Matters Agreement** ” means the Amended and Restated Insurance Matters Agreement between the Parties of even date herewith, as it may be amended from time to time.

“ **Insurance Policies** ” means insurance policies pursuant to which a Person makes a true risk transfer to an insurer.

“ **Insurance Proceeds** ” means those monies: (a) received by an insured from an insurance carrier; or (b) paid by an insurance carrier on behalf of the insured; or (c) from Insurance Policies.

“ **Intellectual Property Agreement** ” means the Intellectual Property Agreement between EMC and VMware dated August 13, 2007, as it may be amended from time to time.

“ **Inter-Company Agreements** ” means the following agreements: the Insurance Matters Agreement, the Intellectual Property Agreement, the Real Estate License Agreement, the Administrative Services Agreement and the Tax Sharing Agreement.

“ **IPO** ” means the initial public offering of VMware.

“ **IPO Date** ” means August 17, 2007, the date of the closing of the IPO.

“ **IPO Registration Statement** ” means the Registration Statement of VMware on Form S-1 (File No. 333-142368), as amended, filed with the Commission under the Securities Act.

“ **Issuance Event** ” has the meaning set forth in Section 5.2.

“ **Issuance Event Date** ” has the meaning set forth in Section 5.2.

“ **Liabilities** ” means all debts, liabilities, guarantees, assurances, commitments and obligations, whether fixed, contingent or absolute, asserted or unasserted, matured or unmatured, liquidated or unliquidated, accrued or not accrued, known or unknown, due or to become due, whenever or however arising (including, without limitation, whether arising out of any Contract or tort based on negligence or strict liability) and whether or not the same would be required by generally accepted principles and accounting policies to be reflected in financial statements or disclosed in the notes thereto.

“ **Loss** ” and “ **Losses** ” mean any and all damages, losses, deficiencies, Liabilities, obligations, penalties, judgments, settlements, claims, payments, fines, interest, costs and expenses (including, without limitation, the costs and expenses of any and all actions and demands, assessments, judgments, settlements and compromises relating thereto and the costs and expenses of attorneys’, accountants’, consultants’ and other professionals’ fees and expenses incurred in the investigation or defense thereof or the enforcement of rights hereunder), including direct and consequential damages, but excluding punitive damages (other than punitive damages awarded to any third party against an indemnified party).

“ **Maximum Number** ” when used in connection with an Underwritten Offering, means the maximum number of shares of VMware Capital Stock (or amount of other Registrable Securities) that the Underwriters’ Representative has informed VMware may be included as part of such offering without materially and adversely affecting the success or pricing of such offering.

“ **NYSE** ” means the New York Stock Exchange.

“ **Option** ” has the meaning set forth in Section 5.1(a).

“ **Option Notice** ” has the set forth in Section 5.2.

“ **Other Holders** ” has the meaning set forth in Section 3.2(c) of this Agreement.

“ **Other Securities** ” has the meaning set forth in Section 3.2(a).

“ **Ownership Percentage** ” means, at any time, the fraction, expressed as a percentage and rounded to the nearest thousandth of a percent, whose numerator is the number of shares equal to the sum of the Class A Applicable Stock and the Class B Applicable Stock and whose denominator is the aggregate number of outstanding shares of Class A common stock and Class B common stock of VMware; *provided, however*, that any shares of Common Stock issued by VMware in violation of its obligations under ARTICLE V of this Agreement shall not be deemed outstanding for the purpose of determining the Ownership Percentage.

“ **Party** ” means Dell Technologies and EMC, together, on the one hand, or VMware, on the other hand, and “ **Parties** ” means Dell Technologies, EMC and VMware collectively.

“ **Permitted Acquisition** ” means any acquisition by VMware or any of its Subsidiaries of Stock, Stock Equivalents or assets of any Person not requiring the prior affirmative vote of the holders of the Class B common stock pursuant to Section 2.11(a)(iii).

“ **Person** ” means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization or a governmental entity or any department, agency or political subdivision thereof.

“ **Privileged Information** ” has the meaning set forth in Section 2.5.

“ **Privileges** ” has the meaning set forth in Section 2.5.

“ **Real Estate License Agreement** ” means the Amended and Restated Real Estate License Agreement between VMware and EMC dated September 21, 2015, as it may be amended from time to time.

“ **Registrable Securities** ” means (i) the Class A common stock and the Class B common stock held by any member of the Dell Technologies Group on the date hereof (the “ **Shares** ”), (ii) any other securities issued or distributed to a member of the Dell Technologies Group in respect of the Class A common stock or Class B common stock by way of stock dividend or stock split or in connection with a combination of shares, recapitalization, reorganization, merger, consolidation or otherwise, (iii) any Class A common stock or other securities received by a member of the Dell Technologies Group into which or for which Class B common stock are converted or exchanged or are convertible or exchangeable, (iv) any other Class A common stock or Class B common stock acquired by a member of the Dell Technologies Group prior to the Distribution Date, and (v) any other successor securities received by a member of the Dell Technologies Group in respect of any of the forgoing (i) through (iv); *provided, however*, that in the event that any Registrable Securities (as defined without giving effect to this proviso) are being registered pursuant hereto, the Holder may include in such registration (subject to the limitations of this Agreement otherwise applicable to the inclusion of Registrable Securities) any Class A common stock or Class B common stock or securities acquired in respect thereof thereafter acquired by such Holder, which shall also be deemed to be “Shares” and accordingly Registrable Securities, for purposes of such registration. As to any particular Registrable Securities, such Registrable Securities shall cease to be Registrable Securities when (w) a registration statement with respect to the sale by Dell Technologies shall have been declared effective under the Securities Act and such Shares shall have been disposed of in accordance with such registration statement, (x) they shall have been distributed to the public in accordance with Rule 144 or they may be sold or transferred by the Holder thereof without restriction pursuant to Rule 144(k), (y) they shall have been otherwise transferred by Dell Technologies to an entity or Person that is not an Affiliated Company of Dell Technologies, new certificates for

them not bearing a legend restricting further transfer shall have been delivered by VMware and subsequent disposition of them shall not require registration or qualification of them under the Securities Act or any state securities or blue sky law then in effect or (z) they shall have ceased to be outstanding.

“ **Registration Expenses** ” means any and all out-of-pocket expenses incident to performance of or compliance with ARTICLE III of this Agreement, including, without limitation, (i) all Commission registration and filing fees, (ii) all fees and expenses of complying with securities or blue sky laws (including fees and disbursements of counsel for any underwriters in connection with blue sky qualifications of the Registrable Securities) or relating to the Financial Industry Regulatory Authority, Inc. (or its successor), (iii) all printing, messenger and delivery expenses, (iv) all fees and expenses incurred in connection with listing (or authorizing for quotation) the Registrable Securities on a securities exchange or automated inter-dealer quotation system pursuant to the requirements hereof, (v) the fees and disbursements of counsel for VMware and of its independent public accountants, (vi) all expenses in connection with the preparation, printing and filing of the registration statement, any preliminary prospectus or final prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to any Holders, underwriters and dealers and all expenses incidental to delivery of the Registrable Securities, (vii) the reasonable fees and disbursements of one firm of counsel, other than VMware’s counsel, selected by the Holders of Registrable Securities being registered, (viii) any fees and disbursements of underwriters customarily paid by the issuers or sellers of securities, and the reasonable fees and expenses of any special experts retained in connection with the requested registration, but excluding underwriting discounts and commissions and transfer taxes, if any, and (ix) the expenses incurred in connection with making “road show” presentations and holding meetings with potential investors to facilitate the distribution and sale of Registrable Securities.

“ **Request** ” has the meaning set forth in Section 3.1(a).

“ **Rule 10A-3(b)(2)** ” means Rule 10A-3(b)(2) (or any successor rule to similar effect) promulgated under the Exchange Act.

“ **Rule 144** ” means Rule 144 (or any successor rule to similar effect) promulgated under the Securities Act.

“ **Rule 415 Offering** ” means an offering on a delayed or continuous basis pursuant to Rule 415 (or any successor rule to similar effect) promulgated under the Securities Act.

“ **Rules of Engagement** ” has the meaning set forth in Section 2.14.

“ **Securities Act** ” means the Securities Act of 1933, as amended.

“ **Selling Holder** ” has the meaning set forth in Section 3.6(e).

“ **Shares** ” has the meaning set forth in the definition of Registrable Securities.

“ **Stock** ” means shares of capital stock (whether denominated as common stock or preferred stock), beneficial, partnership or membership interests, participations or other equivalents (regardless of how designated) of or in a corporation, partnership, limited liability company or business trust, whether voting or non-voting.

“ **Stock Equivalents** ” means all securities convertible into or exchangeable for Stock and all warrants, options or other rights to purchase or subscribe for any Stock, whether or not presently convertible, exchangeable or exercisable, and all voting debt.

“ **Subsidiary** ” of any Person means a corporation, limited liability company, joint venture, partnership, trust, association or other entity in which such Person: (1) beneficially owns, either directly or indirectly, more than fifty percent (50%) of (A) the total combined voting power of all classes of voting securities of such entity, (B) the total combined equity interests, or (C) the capital or profits interest, in the case of a partnership; or (2) otherwise has the power to vote, either directly or indirectly, sufficient securities to elect a majority of the board of directors or similar governing body.

“ **Tax** ” and “ **Taxes** ” have the meaning set forth in the Tax Sharing Agreement.

“ **Tax Sharing Agreement** ” means the Amended and Restated Tax Sharing Agreement between the Parties dated September 6, 2017, as it may be amended from time to time.

“ **Third Party Claim** ” has the meaning set forth in Section 4.7(a).

“ **Underwriters’ Representative** ” when used in connection with an Underwritten Offering, means the managing underwriter of such offering, or, in the case of a co-managed underwriting, the managing underwriters designated as the Underwriters’ Representative by the co-managers.

“ **Underwritten Offering** ” means a registration in which securities of VMware are sold to one or more underwriters for reoffering to the public.

“ **VMware** ” has the meaning set forth in the preamble to this Agreement.

“ **VMware’s Auditors** ” has the meaning set forth in Section 2.3(a)(i).

“ **VMware Balance Sheet** ” shall mean VMware's unaudited consolidated balance sheet for the most recently completed fiscal quarter as of the IPO Date.

“ **VMware Business** ” means the business that is then conducted by VMware and described in its periodic filings with the Commission.

“ **VMware Capital Stock** ” means all classes or series of capital stock of VMware.

“ **VMware Group** ” means the affiliated group (within the meaning of Section 1504(a) of the Code), or similar group of entities as defined under corresponding provisions of the laws of other jurisdictions, of which VMware will be the common parent corporation immediately after the Distribution, and any corporation or other entity which may become a member of such group from time to time.

“ **VMware Indemnitees** ” means VMware, each member of the VMware Group and each of their respective directors, officers and employees.

“ **VMware Liabilities** ” shall mean (without duplication) the following Liabilities:

- (i) all Liabilities reflected in the VMware Balance Sheet;

(ii) all Liabilities of EMC or its Subsidiaries that arise after the date of the VMware Balance Sheet that would be reflected in a VMware balance sheet as of the date of such Liabilities, if such balance sheet was prepared using the same principles and accounting policies under which the VMware Balance Sheet was prepared;

(iii) all Liabilities that should have been reflected in the VMware Balance Sheet but are not reflected in the VMware Balance Sheet due to mistake or unintentional omission;

(iv) all Liabilities (other than Liabilities for Taxes, which are governed by the Tax Sharing Agreement), whether arising before, on or after the IPO Date, that relate to, arise or result from:

(A) the operation of the VMware Business as conducted at any time prior to, on or after the IPO Date (including any Liability relating to, arising out of or resulting from any act or failure to act by any director, officer, employee, agent or representative (whether or not such act or failure to act is or was within such Person's authority)); or

(B) the operation of any business conducted by any member of the VMware Group at any time after the IPO Date (including any Liability relating to, arising out of or resulting from any act or failure to act by any director, officer, employee, agent or representative (whether or not such act or failure to act is or was within such Person's authority));

(v) all Liabilities that are expressly contemplated by this Agreement, or any other Inter-Company Agreement (or the Schedules hereto or thereto) as Liabilities to be assumed by VMware or any member of the VMware Group; and

(vi) Liabilities of any member of the VMware Group under this Agreement or any of the Inter-Company Agreements.

After the IPO Date, EMC and VMware may receive invoices evidencing liabilities jointly incurred by or on behalf of both of them or their respective Affiliates. Accordingly, each of EMC and VMware agrees that such joint liabilities shall be divided among EMC, VMware and their respective Affiliates consistent with past practice and “VMware Liabilities” shall include the portion so allocated to VMware.

“ **Wholly-Owned Subsidiary** ” means each Subsidiary in which VMware owns (directly or indirectly) all of the outstanding voting Stock, voting power, partnership interests or similar ownership interests, except for director's qualifying shares in nominal amount.

WHEREFORE , the Parties have signed this Amended and Restated Master Transaction Agreement effective as of the date first set forth above.

DELL TECHNOLOGIES INC.

/s/Janet M. Bawcom

Name: Janet M. Bawcom

Title: SVP and Assistant Secretary

EMC CORPORATION

/s/Janet M. Bawcom

Name: Janet M. Bawcom

Title: SVP and Assistant Secretary

VMWARE, INC.

/s/Craig Norris

Name: Craig Norris

Title: VP and Assistant Secretary

EXHIBIT A

Rules of Engagement with Storage, Server and Infrastructure Software Vendors

Authored By VMware

January 12, 2004

VMware will continue to engage with our server and storage partners in a consistent and ethical manner. We acknowledge that since we run on all standard Intel hardware, we will often be in a situation where multiple server and storage vendors are involved in any given sales opportunity. In all sales situations, the customer is the primary decision maker determining with which partner we co-sell. In all sales situations, we will adhere to the following guidelines to the best of our ability:

1. If a partner brings VMware into a deal, we will only co-sell in front of the customer with that partner. If a competing partner needs technical assistance behind the scenes, we are obligated to help. We will not attempt to influence the customer to engage with a competing vendor. We will only begin co-selling in front of the customer with a competing hardware partner if requested by the customer.
2. If VMware finds a sales opportunity, we may bring a partner into the opportunity to progress the sale. We will determine which partner to contact based primarily on the customers request.
3. VMware maintains a list of certified and supported hardware and storage configurations. We will share this list with partners and customers and will only sell our products into these certified and supported environments. We will work closely with our server and storage partners to expand these certification lists as new products are released and establish a quarterly review of these lists so as to stay on top of our partner's requirements.
4. VMware will compensate its sales force in a vendor neutral manner. In other words, VMware's sales force will be compensated the same regardless of the server or storage platform on which our products are installed.
5. We will attempt to resolve any potential sales conflict through prompt and open communication with our server and storage partners. We believe that the majority of these cases can be resolved in the field between proper levels of sales management. We will work hard to establish these lines of communication.

AMENDED & RESTATED ADMINISTRATIVE SERVICES AGREEMENT

dated as of January 9, 2018

among

EMC CORPORATION,

DELL TECHNOLOGIES INC.

and

VMWARE, INC.

TABLE OF CONTENTS

		PAGE
ARTICLE I		
DEFINITIONS		
Section 1.01	Definitions	1
Section 1.02	Internal References	2
ARTICLE II		
PURCHASE AND SALE OF SERVICES		
Section 2.01	Purchase and Sale of Overseas Entity Services	2
Section 2.02	Additional Services	3
ARTICLE III		
SERVICE COSTS; OTHER CHARGES		
Section 3.01	Service Costs	3
Section 3.02	Payment	3
Section 3.03	Financial Responsibility for Dell Technologies Personnel	3
ARTICLE IV		
STANDARD OF PERFORMANCE AND INDEMNIFICATION		
Section 4.01	General Standard of Service	4
Section 4.02	Limitation of Liability	4
Section 4.03	Indemnification.	5
ARTICLE V		
TERM AND TERMINATION		
Section 5.01	Term	5
Section 5.02	Termination.	5
Section 5.03	Effect of Termination.	6
ARTICLE VI		
MISCELLANEOUS		
Section 6.01	Ownership.	6
Section 6.02	Other Agreements..	7
Section 6.03	No Agency	7
Section 6.04	Subcontractors	7
Section 6.05	Force Majeure.	7
Section 6.06	Entire Agreement	8
Section 6.07	Information	8

Section 6.08	Notices	8
Section 6.09	Governing Law	9
Section 6.10	Severability	9
Section 6.11	Third Party Beneficiary	9
Section 6.12	Amendment	9
Section 6.13	Counterparts	9
Section 6.14	Authority	9
Section 6.15	Data Protection	9

ADMINISTRATIVE SERVICES AGREEMENT

This Amended and Restated Administrative Services Agreement is dated as of January 9, 2018 by and among VMware, Inc., a Delaware corporation (“**VMware**”), EMC Corporation, a Massachusetts corporation (“**EMC**”), and Dell Technologies Inc., a Delaware corporation and EMC’s parent company (“**Dell Technologies**”). Capitalized terms used herein and not otherwise defined shall have the meanings ascribed to them in Article I hereof.

RECITALS

WHEREAS, EMC directly or indirectly provides various consulting services to the VMware Entities (as defined below) under the terms of the Administrative Services Agreement dated as of August 17, 2007 (the “**Original Agreement**”);

WHEREAS, Dell Technologies acquired 100% of the capital stock of EMC upon the closing of the Agreement and Plan of Merger dated as of October 12, 2015 among EMC, Dell Technologies and certain other parties; and

WHEREAS, VMware and EMC desire to amend and restate the Original Agreement as set forth in this Agreement and add Dell Technologies as a Party.

The Parties therefore amend and restate the Original Agreement to read in its entirety as follows:

ARTICLE I DEFINITIONS

Section 1.01 Definitions. As used in this Agreement, the following terms shall have the following meanings, applicable both to the singular and the plural forms of the terms described:

“**Agreement**” means this Administrative Services Agreement, as the same may be amended and supplemented from time to time in accordance with the provisions hereof.

“**Dell Technologies Employee**” means an employee of a Dell Technologies Entity that provides Services.

“**Dell Technologies Entity**” means Dell Technologies or one of its Subsidiaries (including entities that become a Subsidiary of Dell Technologies after the date hereof but excluding the VMware Entities).

“**Insurance Matters Agreement**” means the Amended and Restated Insurance Matters Agreement between the Parties of even date herewith.

“**Intellectual Property Agreement**” means the Intellectual Property Agreement between EMC and VMware dated August 13, 2007, as it may be amended from time to time.

“**Master Transaction Agreement**” means the Amended and Restated Master Transaction Agreement between the Parties of even date herewith.

“Overseas Entity Services” means various administrative, financial, legal, tax and other services provided by a Dell Technologies Entity to or on behalf of the VMware Entities with respect to countries where VMware does not have an existing legal entity or branch office.

“Party” means Dell Technologies and EMC, together, on the one hand, or VMware, on the other hand, and **“Parties”** means Dell Technologies, EMC and VMware collectively.

“Person” means any individual, partnership, limited liability company, joint venture, corporation, trust, unincorporated organization, government (including any department or agency thereof) or other entity.

“Real Estate License Agreement” means the Amended and Restated Real Estate License Agreement between VMware and EMC dated September 21, 2015, as it may be amended from time to time.

“Services” means various services provided by a Dell Technologies Entity to or on behalf of the VMware Entities pursuant to this Agreement, including Overseas Entity Services.

“Subsidiary” means, as to any Person, a corporation, limited liability company, joint venture, partnership, trust, association or other entity in which such Person: (1) beneficially owns, either directly or indirectly, more than fifty percent (50%) of (A) the total combined voting power of all classes of voting securities of such entity, (B) the total combined equity interests, or (C) the capital or profits interest, in the case of a partnership; or (2) otherwise has the power to vote, either directly or indirectly, sufficient securities to elect a majority of the board of directors or similar governing body.

“Tax Sharing Agreement” means the Amended and Restated Tax Sharing Agreement by and among the Parties dated September 6, 2016.

“VMware Entity” means VMware or one of its Subsidiaries (including entities that become a Subsidiary of VMware after the date hereof).

Section 1.02 Internal References. Unless the context indicates otherwise, references to Articles, Sections and paragraphs shall refer to the corresponding articles, sections and paragraphs in this Agreement and references to the parties shall mean the parties to this Agreement.

ARTICLE II PURCHASE AND SALE OF SERVICES

Section 2.01 Purchase and Sale of Overseas Entity Services.

(a) Subject to the terms and conditions of this Agreement and in consideration of the costs for Services described below, Dell Technologies agrees to provide or cause to be provided to the VMware Entities, and VMware agrees to purchase from Dell Technologies, the Overseas Entity Services, until such Overseas Entity Services are terminated in accordance with the provisions hereof.

(b) Dell Technologies may satisfy its obligation to provide or to procure the Services hereunder by causing one or more of its Subsidiaries to provide or to procure such services. With respect to the Overseas Entity Services provided to, or procured on behalf of, any Subsidiary of VMware,

VMware agrees to pay on behalf of such Subsidiary all amounts payable by or in respect of such Overseas Entity Services pursuant to this Agreement.

Section 2.02 Additional Services. In addition to the Overseas Entity Services to be provided or procured by Dell Technologies in accordance with Section 2.01, if requested by a Party, and to the extent that Dell Technologies and VMware may mutually agree in writing, Dell Technologies or VMware shall provide additional Services to the other Party. The scope of any such additional Services, as well as the costs and other terms and conditions applicable to such services, shall be as mutually agreed by Dell Technologies and VMware prior to the provision of such Services

ARTICLE III SERVICE COSTS; OTHER CHARGES

Section 3.01 Service Costs.

(a) Each Overseas Entity Service will be provided at the price per Dell Technologies Employee calculated based on the fully-burdened compensatory cost for each such Dell Technologies Employee calculated as a percentage of such Dell Technologies Employee's time spent on VMware matters plus any mark-up required by applicable transfer pricing laws, regulations or rules. For purposes of this Agreement, “ **fully-burdened compensatory cost** ” means the total cost of employment compensation to Dell Technologies with respect to each Dell Technologies Employee, including such individual's salary, bonus, equity and other compensation and employment-related insurance, benefits and taxes.

(b) Any additional Services provided by Dell Technologies to VMware or by VMware to Dell Technologies shall be provided at rates mutually agreed to by the parties in writing.

Section 3.02 Payment.

(a) Charges for Services shall be paid in any manner mutually agreed to by Dell Technologies and VMware.

(b) During the term of this Agreement, each Party shall keep such books, records and accounts as are reasonably necessary to verify the calculation of the fees and related expenses for Services provided hereunder. Each Party shall provide documentation supporting any amounts invoiced pursuant to this Section 3.02 as the other Party may from time to time reasonably request. Each Party shall have the right to review such books, records and accounts at any time upon reasonable notice, and each Party agrees to conduct any such review in a manner so as not to unreasonably interfere with the other Party's normal business operations.

Section 3.03 Financial Responsibility for Dell Technologies Personnel. Dell Technologies will pay for all personnel and other related expenses, including salary or wages, of its employees performing the Overseas Entity Services, except that VMware may elect, in its sole discretion, to grant equity awards for VMware common stock to such personnel. No Person providing Services to a VMware Entity pursuant to the terms of this Agreement shall be deemed to be, or shall have any rights as, an employee of any VMware Entity.

ARTICLE IV
STANDARD OF PERFORMANCE AND INDEMNIFICATION

Section 4.01 General Standard of Service. Except as otherwise agreed to in writing by the Parties or as described in this Agreement, the Parties agree that the nature, quality, degree of skill and standard of care applicable to the delivery of the Services hereunder, and the skill levels of the employees providing such Services, shall be substantially the same as or consistent with those which such Party exercises or employs in providing similar services provided within or to itself or its Subsidiaries.

Section 4.02 Limitation of Liability.

(a) The Receiving Party agrees that none of the Provider Entities and their respective directors, officers, agents and employees (each of the Provider Entities and their respective directors, officers, agents and employees, a “**Provider Indemnified Person**”) shall have any liability, whether direct or indirect, in contract or tort or otherwise, to any Receiving Entity or any other Person under the control of such Receiving Entity for or in connection with the Services rendered or to be rendered by any Provider Indemnified Person pursuant to this Agreement, the transactions contemplated hereby or any Provider Indemnified Person’s actions or inactions in connection with any Services or such transactions, except for damages which have resulted from such Provider Indemnified Person’s breach, gross negligence, bad faith or willful misconduct in connection with the foregoing. If the Dell Technologies Entities are providing Services, “**Providing Party**” means Dell Technologies, “**Provider Entities**” means the Dell Technologies Entities, “**Receiving Party**” means VMware and “**Receiving Entities**” means the VMware Entities. If the VMware Entities are providing Services, “**Providing Party**” means VMware, “**Provider Entities**” means the VMware Entities, “**Receiving Party**” means Dell Technologies and “**Receiving Entities**” means the Dell Technologies Entities.

(b) Notwithstanding the provisions of this Section 4.03, none of the Parties shall be liable for any special, indirect, incidental, or consequential damages of any kind whatsoever (including, without limitation, attorneys’ fees) in any way due to, resulting from or arising in connection with any of the Services or the performance of or failure to perform a Party’s obligations under this Agreement. This disclaimer applies without limitation (1) to claims arising from the provision of the Services or any failure or delay in connection therewith; (2) to claims for lost profits; (3) regardless of the form of action, whether in contract, tort (including negligence), strict liability, or otherwise; and (4) regardless of whether such damages are foreseeable or whether such Party has been advised of the possibility of such damages.

(c) None of the Provider Entities shall have any liability to any Receiving Entity or any other Person for failure to perform a Provider Entity’s obligations under this Agreement or otherwise, where such failure to perform similarly affects the Provider Entities receiving the same or similar services and does not have a disproportionately adverse effect on the Receiving Entities, taken as a whole.

(d) In addition to the foregoing, the Receiving Party agrees that, in all circumstances, it shall use commercially reasonable efforts to mitigate and otherwise minimize damages to the Receiving Entities, individually and collectively, whether direct or indirect, due to, resulting from or arising in connection with any failure by the Providing Party to comply fully with its obligations under this Agreement.

Section 4.03 Indemnification.

(a) The Receiving Party agrees to indemnify and hold harmless each Provider Indemnified Person from and against any damages related to, and to reimburse each Provider Indemnified Person for all reasonable expenses (including, without limitation, attorneys' fees) as they are incurred in connection with, pursuing or defending any claim, action or proceeding, (collectively, "**Actions**"), arising out of or in connection with Services rendered or to be rendered by any Provider Indemnified Person pursuant to this Agreement, the transactions contemplated hereby or any Provider Indemnified Person's actions or inactions in connection with any such Services or transactions; *provided, however*, that the Receiving Party shall not be responsible for any damages incurred by any Provider Indemnified Person that have resulted from such Provider Indemnified Person's gross negligence or willful misconduct in connection with any of the advice, actions, inactions, or Services referred to in this Section 4.04(a).

(b) The Providing Party agrees to indemnify and hold harmless each director, officer, agent and employee of the Receiving Party from and against any damages related to, and to reimburse each such individual for all reasonable expenses (including, without limitation, attorneys' fees) as they are incurred in connection with, pursuing or defending any Action arising out of or related to the gross negligence or willful misconduct of any Provider Indemnified Person in connection with the Services rendered or to be rendered pursuant to this Agreement; *provided, however*, that, the Providing Party shall not be responsible for any damages incurred by any Receiving Party director, officer, agent or employee that have resulted from any Receiving Entity's, or any Receiving Entity's director's, officer's, agent's or employee's, gross negligence or willful misconduct in connection with the Services rendered or to be rendered pursuant to this Agreement.

ARTICLE V TERM AND TERMINATION

Section 5.01 Term. Except as otherwise provided in this Article V or as otherwise agreed in writing by the Parties, this Agreement shall continue until terminated by a Party in writing with not less than one hundred eighty (180) days' notice.

Section 5.02 Termination.

(a) The Parties may by mutual agreement from time to time terminate this Agreement with respect to one or more of the Services, in whole or in part.

(b) A Receiving Party may terminate any Service at any time (i) upon at least thirty (30) days prior written notice of such termination by the Receiving Party to the Providing Party, effective as of such 30th day, and (ii) if the Providing Party shall have failed to perform any of its material obligations under this Agreement relating to such Service, the Receiving Party shall have notified the Providing Party in writing of such failure, and such failure shall have continued for a period of at least thirty (30) days after receipt by the Providing Party of written notice of such failure from the Receiving Party, effective as of such 30th day.

Section 5.03 Effect of Termination.

(a) Other than as required by law, upon the effective date of the termination of any Service pursuant to Section 5.02, or upon termination of this Agreement in accordance with its terms, the Providing Party shall have no further obligation to provide the terminated Service (or any Service, in the case of termination of this Agreement) and the Receiving Party shall have no obligation to pay any fees relating to such terminated Services or to make any other payments hereunder; *provided, however*, that, notwithstanding such termination, (i) the Receiving Party shall remain liable to the Providing Party for fees owed and payable in respect of Services provided prior to the effective date of the termination; (ii) the Providing Party shall continue to charge the Receiving Party for administrative and program costs relating to benefits paid after but incurred prior to the termination of any Service, and the Receiving Party shall be obligated to pay such expenses in accordance with the terms of this Agreement, provided that (A) the Providing Party makes reasonable efforts to obtain available refunds of such costs and (B) if the Providing Party obtains a refund of any such costs already paid by the Receiving Party, the Providing Party shall return such portion of the costs to the Receiving Party; and (iii) the provisions of Articles IV, V, and VI shall survive any such termination indefinitely.

(b) Following termination of this Agreement with respect to any Service, the Parties agree to cooperate with each other in providing for an orderly transition of such Service to the Receiving Party or to a successor service provider as designated by the Receiving Party.

ARTICLE VI MISCELLANEOUS

Section 6.01 Ownership.

(a) Neither Party will gain, by virtue of this Agreement or the Services provided hereunder, by implication or otherwise, any rights of ownership of any property or intellectual property rights owned by the other or their respective Subsidiaries.

(b) VMware shall own all property or intellectual property rights created in the performance of Services by Dell Technologies Entities solely on behalf of VMware Entities, as well as any changes, additions or improvements to VMware's property and intellectual property made by the Dell Technologies Entities solely on behalf of the VMware Entities in the performance of the Services. In addition, VMware will own any data with respect to VMware and any other VMware Entity to the extent such data is developed solely by Dell Technologies Entities on behalf of VMware and any other VMware Entity. To the extent that data provided by a VMware Entity to a Dell Technologies Entity is owned by a VMware Entity and such data is processed or used by Dell Technologies in performance of the Services, such data and any modifications to that data shall remain the property of VMware. The provisions of this Section 6.01(b) do not grant VMware any rights to any data concerning Dell Technologies, any other Dell Technologies Entity or Dell Technologies' business.

(c) Dell Technologies shall own all property or intellectual property rights created in the performance of Services by VMware Entities solely on behalf of Dell Technologies Entities, as well as any changes, additions or improvements to the Dell Technologies Entities' property and intellectual property made by the VMware Entities solely on behalf of the Dell Technologies Entities in the performance of the Services. In addition, Dell Technologies will own any data with respect to any Dell Technologies Entities, to the extent such data is developed solely by VMware Entities on behalf of Dell Technologies or any Dell Technologies Entity. To the extent that data provided by a Dell Technologies Entity to a VMware Entity is owned by a Dell Technologies Entity and such data is

processed or used by VMware in performance of the Services, such data and any modifications to that data shall remain the property of Dell Technologies. The provisions of this Section 6.01(c) do not grant Dell Technologies any rights to any data concerning VMware, any other VMware Entity or VMware's business.

Section 6.02 Other Agreements. In the event there is any inconsistency between the provisions of this Agreement and the respective provisions of the Insurance Matters Agreement, the Tax Sharing Agreement, the Real Estate License Agreement, the Master Transaction Agreement and the Intellectual Property Agreement, respectively, the respective provisions of the Insurance Matters Agreement, Tax Sharing Agreement, the Real Estate License Agreement, the Master Transaction Agreement and the Intellectual Property Agreement shall govern. In the event there is any inconsistency between the provisions of this Agreement and the respective provisions of any other agreements entered into by the Parties with respect to the provision of additional Services, then the respective provisions of such other agreements shall govern, provided that such other agreements make express reference to this Agreement.

Section 6.03 No Agency. Nothing in this Agreement shall constitute or be deemed to constitute a partnership or joint venture between the Parties hereto or constitute or be deemed to constitute any Party the agent or employee of the other Party for any purpose whatsoever, and neither Party shall have authority or power to bind the other Party or to contract in the name of, or create a liability against, the other Party in any way or for any purpose.

Section 6.04 Subcontractors. The Providing Party may hire or engage one or more third-party subcontractors (each, a “**Subcontractor**”) to perform all or any of its obligations under this Agreement; *provided, however*, that, subject to Section 4.03, the Providing Party shall pay for all fees due each such Subcontractor and shall in all cases remain primarily responsible for all obligations undertaken by each such Subcontractor on the Providing Party's behalf pursuant to the terms of this Agreement with respect to the scope, quality, degree of skill and nature of the Services provided to the Receiving Party; and *provided, further*, that without the prior written consent of the Receiving Party, the Providing Party may only hire or engage Subcontractors to perform the Services to the extent that any such Subcontractor is a natural person performing similar services for the Providing Party. The Providing Party shall cause any Subcontractor performing Services under this Agreement to execute a customary nondisclosure agreement.

Section 6.05 Force Majeure.

(a) For purposes of this Section 6.05, “**Force Majeure**” means an event beyond the control of either Party, which by its nature could not have been foreseen by such Party, or, if it could have been foreseen, was unavoidable, and includes without limitation, acts of God, storms, floods, riots, fires, sabotage, civil commotion or civil unrest, interference by civil or military authorities, acts of war (declared or undeclared) and failure of energy sources.

(b) Continued performance of a Service may be suspended immediately to the extent caused by Force Majeure. The Party claiming suspension of a Service due to Force Majeure will give prompt notice to the other of the occurrence of the event giving rise to the suspension and of its nature and anticipated duration. The Parties shall cooperate with each other to find alternative means and methods for the provision of the suspended Service.

(c) Without limiting the generality of Section 4.03, neither Party shall be under any liability for failure to fulfill any obligation under this Agreement, so long as and to the extent to which the

fulfillment of such obligation is prevented, frustrated, hindered, or delayed as a consequence of circumstances of Force Majeure.

Section 6.06 Entire Agreement. This Agreement (including the Schedules constituting a part of this Agreement) and any other writing signed by the Parties that specifically references or is specifically related to this Agreement constitute the entire agreement among the Parties with respect to the subject matter hereof and supersede all prior agreements, understandings and negotiations, both written and oral, between the Parties with respect to the subject matter hereof. This Agreement is not intended to confer upon any Person other than the Parties hereto any rights or remedies hereunder.

Section 6.07 Information. Subject to applicable law and privileges, each Party hereto covenants with and agrees to provide to the other Party all information regarding itself and transactions under this Agreement that the other Party reasonably believes is required to comply with all applicable federal, state, county and local laws, ordinances, regulations and codes, including, but not limited to, securities laws and regulations.

Section 6.08 Notices. Notices, offers, requests or other communications required or permitted to be given by either party pursuant to the terms of this Agreement shall be given in writing to the respective Parties to the following addresses:

if to Dell Technologies or EMC:

Dell Inc.
One Dell Way, RR1-33
Round Rock, TX 78682
Attention: General Counsel

if to VMware:

VMware, Inc.
3401 Hillview Avenue
Palo Alto, CA 94304
Attention: General Counsel

or to such other address as the party to whom notice is given may have previously furnished to the other in writing as provided herein. All notices shall be sent by hand delivery, recognized overnight courier or, within the United States, may also be sent via certified mail, return receipt requested. All notices shall be deemed to have been given when received, if hand delivered; one working day after it is sent, if sent by recognized overnight courier; and three days after it is postmarked, if mailed first class mail or certified mail, return receipt requested, with postage prepaid.

Section 6.09 Governing Law. This Agreement, including the validity hereof and the rights and obligations of the Parties hereunder, shall be construed in accordance with and shall be governed by the laws of the state of Delaware applicable to contracts made and to be performed entirely in such state (without giving effect to the conflicts of laws provisions thereof).

Section 6.10 Severability. If any terms or other provision of this Agreement or the Schedules or exhibits hereto shall be determined by a court, administrative agency or arbitrator to be invalid, illegal or unenforceable, such invalidity or unenforceability shall not render the entire Agreement invalid. Rather, this Agreement shall be construed as if not containing the particular invalid, illegal or unenforceable provision, and all other provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either Party. Upon such determination that any term or other provision is invalid, illegal or unenforceable, the Parties shall negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent permitted under applicable law.

Section 6.11 Third Party Beneficiary. None of the provisions of this Agreement shall be for the benefit of or enforceable by any third party, including any creditor of any Person. No such third party shall obtain any right under any provision of this Agreement or shall by reasons of any such provision make any claim in respect of any liability (or otherwise) against either Party hereto.

Section 6.12 Amendment. This Agreement may only be amended by a written agreement executed by both Parties hereto.

Section 6.13 Counterparts. This Agreement may be executed in separate counterparts, each of which shall be deemed an original and all of which, when taken together, shall constitute one and the same agreement.

Section 6.14 Authority. Each of the Parties represent to the other Party that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other actions, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is its legal, valid and binding obligation, enforceable against it in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

Section 6.15 Data Protection.

(a) Each Party may from time to time receive information that relates to identified or identifiable individuals from, or receive, create, transmit or maintain such information on behalf of, the other Party in connection with its provision of Services under this Agreement (“**Personal Information**”). Each Party may collect, access, use, transfer and disclose (“**Process**”) such Personal Information as necessary to perform the Services but shall not transfer or otherwise disclose the other Party's Personal Information to any third parties without the other Party's prior consent unless required to by, or in connection with, law enforcement action, subpoena or other litigation or applicable law or in connection with a prospective or actual sale, merger, transfer or other reorganization of all or part of its business. Each Party agrees to comply with all privacy, security and data protection laws that are applicable to such Party in connection with its Processing of the other Party's Personal Information. Each Party represents, warrants and covenants that it has all necessary rights and authorities to provide or make

available its Personal Information to the other Party under this Agreement and to authorize the other Party to Process that Personal Information in accordance with this Agreement. Each Party shall Process the other Party's Personal Information in accordance with the other Party's instructions. Each Party shall implement and maintain technical and organizational measures to protect the Personal Information against accidental or unlawful destruction, accidental loss, alteration, unauthorized disclosure or access (each, a "**Data Breach**"). If a Party discovers a Data Breach involving the other Party's Personal Information, such Party agrees to provide prompt notice to the other Party and to investigate such Data Breach and put in place measures designed to address the Data Breach to the extent reasonably practicable. Each Party shall take reasonable steps to ensure the reliability of its personnel that may have access to the other Party's Personal Information and that they are appropriately trained in the handling and care of personal data. Each Party shall fully assist the other Party with all information requests that may be received from data subjects of the other Party's Personal Information.

(b) Upon written request, each Party agrees to meet with the other Party to review and discuss information regarding its systems, security procedures, business continuity, business controls and procedures undertaken by such Party in respect of the other Party's Personal Information. Each Party agrees to cooperate with the other Party to resolve any reasonable concerns regarding its processing of the other Party's Personal Information under this Agreement.

(c) A Party may subcontract the Processing of the other Party's Personal Information to Third Parties (including without limitation its affiliates and subcontractors) if required in order to provide the Services; provided that such Party: (i) remains responsible for compliance by such Third Party with the applicable obligations imposed upon the Parties under this Section 6.15 as if that Third Party were such Party; (ii) will require each such Third Party to provide sufficient assurances regarding the security measures it is required to take for the processing of the other Party's Personal Information, which shall be materially equivalent to those measures that the Parties are required to take under this Section 6.15 and take reasonable steps to ensure the Third Party complies with such measures; and (iii) puts in place a contract in writing with the Third Party to govern the Processing of the other Party's Personal Information and which requires the Third Party to comply with substantially similar obligations in respect of the Processing of Personal Information as the obligations imposed upon the Parties under this Section 6.15.

(d) As soon as practicable upon execution of this Agreement, the Parties shall execute Standard Contractual Clauses (controller to controller 2004/91/EC and controller to processor 2010/87/EU as appropriate) in compliance with Article 25 of the EU Data Protection Directive 95/46/EC or any successor legislation pursuant thereto designed to permit the Parties to transfer the Personal Information internationally (the "**Data Transfer Agreement**"). Upon execution of the Data Transfer Agreement, Dell Technologies and VMware, respectively, may transfer Personal Information to each other and each other's affiliates and subcontractors that are outside the European Economic Area where such transfer is required under or in connection with the provision of the Services or as otherwise permitted under applicable laws. With respect to personnel subject to Article 25 of the EU Data Protection Directive 95/46/EC or any successor legislation pursuant thereto designed to permit the Parties to transfer the Personal Information internationally, Dell Technologies and VMware will not transfer Personal Information internationally to one another or to the other Party's affiliates and subcontractors until after the Data Transfer Agreement is executed.

[Signature Page Follows]

IN WITNESS WHEREOF , the Parties have caused this Agreement to be signed by their duly authorized representatives.

DELL TECHNOLOGIES INC.

By: /s/Janet M. Bawcom
Name: Janet M. Bawcom
Title: SVP and Assistant Secretary

EMC CORPORATION

By: /s/Janet M. Bawcom
Name: Janet M. Bawcom
Title: SVP and Assistant Secretary

VMWARE, INC.

By: /s/Craig Norris
Name: Craig Norris
Title: VP and Assistant Secretary

AMENDED AND RESTATED INSURANCE MATTERS AGREEMENT

This Amended and Restated Insurance Matters Agreement is dated as of January 9, 2018 by and between VMware, Inc., a Delaware corporation (“**VMware**”), EMC Corporation, a Massachusetts corporation (“**EMC**”), and Dell Technologies Inc., a Delaware corporation and EMC’s parent company (“**Dell Technologies**”). Capitalized terms used herein and not otherwise defined shall have the meanings ascribed to them in Article I hereof.

RECITALS

WHEREAS, EMC is the beneficial owner of all the issued and outstanding common stock of VMware;

WHEREAS, EMC provides insurance to the VMware Entities under the terms of the Insurance Matters Agreement dated as of August 17, 2007 (the “**Original Agreement**”);

WHEREAS, Dell Technologies acquired 100% of the capital stock of EMC upon the closing of the transactions contemplated by the Agreement and Plan of Merger dated as of October 12, 2015, as amended, among EMC, Dell Technologies and certain other parties; and

WHEREAS, VMware and EMC desire to amend and restate the Original Agreement as set forth in this Agreement and add Dell Technologies as a Party.

The Parties therefore amend and restate the Original Agreement to read in its entirety as follows:

ARTICLE I DEFINITIONS

Section 1.01 Definitions. As used in this Agreement, the following terms shall have the following meanings, applicable both to the singular and the plural forms of the terms described:

“**Agreement**” means this Insurance Matters Agreement, as the same may be amended and supplemented from time to time in accordance with the provisions hereof.

“**Contract**” means any contract, agreement, lease, license, sales order, purchase order, instrument or other commitment that is binding on any Person or any part of such Person’s property under applicable law.

“**Dell Technologies Entity**” means Dell Technologies or one of its Subsidiaries (including entities that become a Subsidiary of Dell Technologies after the date hereof but excluding the VMware Entities).

“**Insurance Policies**” means insurance policies pursuant to which a Person makes a true risk transfer to an insurer.

“ **Insurance Proceeds** ” means those monies: (a) received by an insured from an insurance carrier; or (b) paid by an insurance carrier on behalf of the insured; or (c) from Insurance Policies.

“ **Insured VMware Liability** ” means any VMware Liability to the extent that it is covered under the terms of the Covered Insurance Policies or the Dell Technologies Insurance Policies in effect prior to the end of the Insurance Transition Period.

“ **Liabilities** ” means all debts, liabilities, guarantees, assurances, commitments and obligations, whether fixed, contingent or absolute, asserted or unasserted, matured or unmatured, liquidated or unliquidated, accrued or not accrued, known or unknown, due or to become due, whenever or however arising (including, without limitation, whether arising out of any Contract or tort based on negligence or strict liability) and whether or not the same would be required by generally accepted principles and accounting policies to be reflected in financial statements or disclosed in the notes thereto.

“ **Master Transaction Agreement** ” means the Amended and Restated Master Transaction Agreement between the Parties of even date herewith.

“ **Party** ” means Dell Technologies and EMC, together, on the one hand, or VMware, on the other hand, and “ **Parties** ” means Dell Technologies, EMC and VMware collectively.

“ **Person** ” means any individual, partnership, limited liability company, joint venture, corporation, trust, unincorporated organization, government (including any department or agency thereof) or other entity.

“ **Subsidiary** ” means, as to any Person, a corporation, limited liability company, joint venture, partnership, trust, association or other entity in which such Person: (1) beneficially owns, either directly or indirectly, more than fifty percent (50%) of (A) the total combined voting power of all classes of voting securities of such entity, (B) the total combined equity interests, or (C) the capital or profits interest, in the case of a partnership; or (2) otherwise has the power to vote, either directly or indirectly, sufficient securities to elect a majority of the board of directors or similar governing body.

“ **VMware Business** ” means the business conducted by VMware, as described in its periodic filings with the U.S. Securities and Exchange Commission.

“ **VMware Entity** ” means VMware or one of its Subsidiaries (including entities that become a Subsidiary of VMware after the date hereof).

“ **VMware Liabilities** ” has the meaning set forth in the Master Transaction Agreement.

Section 1.02 Internal References . Unless the context indicates otherwise, references to Articles, Sections and paragraphs shall refer to the corresponding articles, sections and paragraphs in this Agreement and references to the parties shall mean the parties to this Agreement.

ARTICLE II INSURANCE MATTERS

Section 2.01 VMware Insurance Coverage During Transition Period.

(a) The Parties recognize that the Dell Technologies Entities have contracted with third-party insurers to maintain insurance coverage under various Insurance Policies (the “**Covered Insurance Policies**”) that cover and are for the benefit of, among others, the VMware Entities and their respective directors, officers and employees (collectively, the “**VMware Covered Parties**”). Throughout the period ending upon the termination or expiration of this Agreement in accordance with Article IV hereof (the “**Insurance Transition Period**”), the Dell Technologies Entities shall, to the extent requested by VMware, continue to contract with third-party insurers to maintain insurance coverage (the “**Insurance Coverage**”) under Insurance Policies covering and for the benefit of the VMware Covered Parties (collectively, the “**Dell Technologies Insurance Policies**”; each individually, a “**Dell Technologies Insurance Policy**”), which are comparable to the Covered Insurance Policies maintained by EMC covering the VMware Covered Parties prior to the date hereof.

(b) Except to the extent that Dell Technologies allocates a portion of Dell Technologies’ insurance costs to the VMware Entities, upon receipt of a written invoice from Dell Technologies, VMware shall promptly pay or reimburse Dell Technologies, as the case may be, for the VMware Covered Parties’ pro rata portion of the premium expenses and deductibles, any retention amounts and any other costs and expenses (collectively, “**Insurance Expenses**”) which Dell Technologies may incur in connection with the Covered Insurance Policies or the Dell Technologies Insurance Policies, including but not limited to any retroactive or subsequent premium adjustments. The written invoice shall set forth in reasonable details the amount and manner of calculation of the Insurance Expenses being charged and the Dell Technologies Insurance Policies and the period of Insurance Coverage to which such Insurance Expenses relate. The VMware Covered Parties’ pro rata portion of any deductible or retention amount shall be an amount equal to the full amount of the applicable deductible or retention amount multiplied by the VMware Covered Parties’ applicable pro rata percentage of premium expenses payable to Dell Technologies under the Dell Technologies Insurance Policies. The VMware Covered Parties’ pro rata portion of other costs and expenses shall be calculated as mutually agreed by Dell Technologies and VMware.

(c) Dell Technologies shall provide VMware with prompt written notice of any increase in rates for Insurance Coverage maintained under any Dell Technologies Insurance Policy, any premium increase or other material change to any Dell Technologies Insurance Policy. VMware shall not be required to pay or reimburse Dell Technologies, as the case may be, for any increase of greater than 5% in the applicable rates for Insurance Coverage maintained under any Dell Technologies Insurance Policy in any given calendar year during the Insurance Transition Period.

Section 2.02 Cooperation; Payment of Insurance Proceeds to VMware; Agreement Not to Release Carriers. Subject to the provisions of Section 2.4 of the Master Transaction Agreement, each Party shall share such information as is reasonably necessary in order to permit the other Party to manage and conduct its insurance matters in an orderly fashion. Dell Technologies, at the request of VMware, shall cooperate with and use its reasonable best efforts to assist VMware in recovering Insurance Proceeds under the Covered Insurance Policies or the Dell Technologies Insurance Policies for claims relating to the VMware Business, the assets of VMware or VMware Liabilities, whether such claims arise under any Contract or agreement, by operation of law or otherwise, existing or arising from any past acts or events occurring or failing to occur or alleged to have occurred or to have failed to occur or any conditions existing or alleged to have existed before or during the Insurance Transition Period,

and Dell Technologies shall promptly pay any such recovered Insurance Proceeds to VMware. Neither Dell Technologies nor VMware, nor any of their respective Subsidiaries, shall take any action which would intentionally jeopardize or otherwise interfere with the other Party's ability to collect any proceeds payable pursuant to any Insurance Policy. Except as otherwise contemplated by this Agreement or any other agreement between the Parties, neither Dell Technologies nor VMware (and each Party shall ensure that no affiliate of such Party), without the consent of the other Party (such consent not to be unreasonably withheld), shall provide any insurance carrier for a Dell Technologies Insurance Policy with a release, or amend, modify or waive any rights under any such policy or agreement, if such release, amendment, modification or waiver would adversely affect any rights or potential rights of the other Party (or its Subsidiary) thereunder. However, no right or obligation of either Party arising solely in connection with the recovery or collection of Insurance Proceeds or the provision to any insurance carrier of a release, amendment, modification or waiver of rights pursuant to this Section 2.02 shall (A) preclude any Dell Technologies Entity or any VMware Entity from presenting any claim or from exhausting any policy limit, (B) except as otherwise required under the terms of this Agreement, require any Dell Technologies Entity or any VMware Entity to pay any premium or other amount or to incur any Liability, or (C) except as otherwise required under the terms of this Agreement, require any Dell Technologies Entity or VMware Entity to renew, extend or continue any policy in force.

Section 2.03 VMware Insurance Coverage After the Insurance Transition Period. After the expiration of the Insurance Transition Period, VMware shall be responsible for obtaining and maintaining Insurance Policies in respect of the VMware Entities' risk of loss and such insurance arrangements shall be separate and apart from the Dell Technologies Insurance Policies, provided that nothing herein shall be deemed to be a relinquishment of any rights of a VMware Covered Party under any Covered Insurance Policies or Dell Technologies Insurance Policies written on an occurrence basis issued prior to the termination of the Insurance Transition Period.

Section 2.04 Deductibles and Self-Insured Obligations

. Subject to the provisions of Section 2.01(b), solely with respect to VMware Liabilities and Insured VMware Liabilities, VMware shall reimburse Dell Technologies for all amounts necessary to exhaust or otherwise to satisfy all applicable self-insured retentions, amounts for fronted policies, deductibles and retrospective premium adjustments and similar amounts not covered by the Covered Insurance Policies or the Dell Technologies Insurance Policies to the extent that Dell Technologies is required to pay any such amounts.

Section 2.05 Procedures with Respect to Insured VMware Liabilities.

(a) Upon receipt of a reasonably detailed, itemized invoice from Dell Technologies, VMware shall promptly reimburse Dell Technologies for all amounts reasonably incurred by Dell Technologies in pursuing insurance recoveries (“**Recovery Expenses**”) from the Covered Insurance Policies and the Dell Technologies Insurance Policies in respect of Insured VMware Liabilities covered by such policies. To the extent any such Recovery Expenses relate to pursuing insurance recoveries in respect of both Insured VMware Liabilities and insured Liabilities of Dell Technologies under such policies, VMware shall only reimburse Dell Technologies for Recovery Expenses relating to the Insured VMware Liabilities.

(b) The defense of claims, suits or actions giving rise to potential or actual Insured VMware Liabilities shall be managed (in conjunction with Dell Technologies' insurers, as appropriate) by VMware, except such claims, suits or actions giving rise to potential or actual Liabilities of Dell Technologies, in which case the defense of such claims, suits or actions shall be jointly managed (in conjunction with Dell Technologies' insurers, as appropriate) by VMware and Dell Technologies.

Section 2.06 Risk Managers. During the Insurance Transition Period, each of Dell Technologies and VMware shall appoint one of their respective employees as a risk manager (each, a “**Risk Manager**”) who will have overall responsibility for managing and coordinating the Dell Technologies Insurance Policies, including ensuring that there is adequate Insurance Coverage for VMware Covered Parties and for all matters related thereto. The Risk Managers will use their reasonable efforts to consult and coordinate with each other on issues arising under this Agreement with respect to the Insurance Coverage to be maintained for or on behalf of the VMware Covered Parties pursuant to this Agreement.

Section 2.07 Cooperation. Dell Technologies and VMware shall cooperate with each other in all respects, and shall execute any additional documents which are reasonably necessary, to effectuate the provisions of this Article II.

Section 2.08 No Assignment or Waiver. This Agreement shall not be considered as an attempted assignment of any policy of insurance or as a contract of insurance and shall not be construed to waive any right or remedy of any Dell Technologies Entity in respect of any Insurance Policy or any other contract or policy of insurance.

Section 2.09 No Liability. VMware does hereby, for itself and as agent for each other VMware Entity, agree that no Dell Technologies Entity or its respective directors, officers, agents and employees (each Dell Technologies Entity and each of its respective directors, officers, agents and employees, an “**Dell Technologies Indemnified Person**”) shall have any Liability whatsoever as a result of the insurance policies and practices of Dell Technologies and its Subsidiaries as in effect at any time prior to the end of the Insurance Transition Period, including as a result of the level or scope of any such insurance, the creditworthiness of any insurance carrier, the terms and conditions of any policy, or the adequacy or timeliness of any notice to any insurance carrier with respect to any claim or potential claim or otherwise, except for Liabilities resulting from any breach of this Agreement, the Covered Insurance Policies or the Dell Technologies Insurance Policies on the part of any Dell Technologies Indemnified Person, or the gross negligence, bad faith or willful misconduct of any Dell Technologies Indemnified Person in connection with this Agreement, the Covered Insurance Policies or the Dell Technologies Insurance Policies.

Section 2.10 Additional or Alternate Insurance. Notwithstanding any other provision of this Agreement, during the Insurance Transition Period, Dell Technologies and VMware shall work together to evaluate insurance options and secure additional or alternate insurance for VMware or Dell Technologies if desired by and cost effective for VMware and Dell Technologies, as determined by the mutual consent of the Parties. Nothing in this Agreement shall be deemed to restrict any VMware Entity from acquiring at its own expense any other Insurance Policy in respect of any Liabilities or covering any period.

Section 2.11 Further Agreements. The Parties acknowledge that they intend to allocate financial obligations without violating any laws regarding insurance, self-insurance or other financial responsibility. If it is determined that any action undertaken pursuant to this Agreement or any related agreement is violative of any insurance, self-insurance or related financial responsibility law or regulation, the Parties agree to work together to do whatever is necessary to comply with such law or regulation while trying to accomplish, as much as possible, the allocation of financial obligations as intended in this Agreement or any such related agreement.

ARTICLE III INDEMNIFICATION

Section 3.01 VMware agrees to indemnify and hold harmless each Dell Technologies Indemnified Person from and against any damages related to, and to reimburse each Dell Technologies Indemnified Person for all reasonable expenses (including, without limitation, attorneys' fees) as they are incurred in connection with, pursuing or defending any claim, action or proceeding (collectively, "**Actions**"), arising out of or in connection with the Dell Technologies Insurance Policies, including as a result of the level or scope of any such insurance, the creditworthiness of any insurance carrier, the terms and conditions of any policy, or the adequacy or timeliness of any notice to any insurance carrier with respect to any claim or potential claim or otherwise, or this Agreement, but solely to the extent such Action arises out of or relates to the breach by, or the gross negligence, bad faith or willful misconduct of, any VMware Covered Party in connection with this Agreement, the Covered Insurance Policies or the Dell Technologies Insurance Policies; *provided, however*, that, VMware shall not be responsible for any damages incurred by any Dell Technologies Indemnified Person that result from any breach of this Agreement, the Covered Insurance Policies or the Dell Technologies Insurance Policies on the part of any Dell Technologies Indemnified Person, or the gross negligence, bad faith or willful misconduct of any Dell Technologies Indemnified Person in connection with this Agreement, the Covered Insurance Policies or the Dell Technologies Insurance Policies.

Section 3.02 Dell Technologies agrees to indemnify and hold harmless each VMware director, officer, agent and employee from and against any damages related to, and to reimburse each such individual for all reasonable expenses (including, without limitation, attorneys' fees) as they are incurred in connection with, pursuing or defending any Action arising out of or related to the breach by, or the gross negligence, bad faith or willful misconduct of, any Dell Technologies Indemnified Person in connection with this Agreement or the Dell Technologies Insurance Policies; *provided, however*, that, Dell Technologies shall not be responsible for any damages incurred by any VMware director, officer, agent or employee that result from any breach of this Agreement, the Covered Insurance Policies or the Dell Technologies Insurance Policies on the part of any VMware Covered Party, or the gross negligence, bad faith or willful misconduct of any VMware Covered Party in connection with this Agreement, the Covered Insurance Policies or the Dell Technologies Insurance Policies.

ARTICLE IV TERM AND TERMINATION

Section 4.01 Term. Except as otherwise provided in this Article IV or as otherwise agreed in writing by the Parties:

(a) This Agreement shall have a term ending on the date that is forty-five (45) days after the date upon which the Dell Technologies Entities hold shares of VMware common stock representing less than a majority of the votes entitled to be cast by all holders of such common stock; and

(b) Dell Technologies' obligation to maintain Insurance Coverage for the VMware Entities under the Dell Technologies Insurance Policies, and VMware's obligation to pay or reimburse Dell Technologies, as the case may be, for Insurance Expenses which Dell Technologies may incur in connection with such Insurance Coverage shall cease as of the applicable date determined in accordance with this Article IV. Dell Technologies shall provide VMware with prior written notice of termination of this Agreement pursuant to Section 4.01(a) as soon as reasonably practical after Dell Technologies' determination of the date upon which the Dell Technologies Entities hold shares of VMware common stock representing less than a majority of the votes entitled to be cast by all holders of VMware common stock.

Section 4.02 Termination.

(a) VMware may terminate this Agreement at any time, effective as of the last day of a month, provided that (i) VMware has contracted with third-party insurers reasonably acceptable to Dell Technologies to maintain insurance coverage under Insurance Policies covering and for the benefit of the VMware Covered Parties, which Insurance Policies, in the reasonable judgment of Dell Technologies, provide no less coverage than the Dell Technologies Insurance Policies in effect as of the date of such termination and (ii) VMware has given Dell Technologies written notice of such termination prior to the first day of such month.

(b) Either Party may terminate this Agreement at any time if the other Party shall have failed to perform any of its material obligations under this Agreement, such Party shall have notified the other Party in writing of such failure, and such failure shall have continued for a period of at least thirty (30) days after receipt by the other Party of written notice of such failure, effective as of such 30th day.

Section 4.03 Effect of Termination . Other than as required by law, upon the effective date of the termination of this Agreement pursuant to Section 4.02, or upon termination of this Agreement in accordance with its terms, Dell Technologies shall have no further obligation to maintain Insurance Coverage under the Dell Technologies Insurance Policies in respect of the VMware Covered Parties and VMware shall have no obligation to pay for any Insurance Expenses which Dell Technologies may incur in connection with such Insurance Policies or to make any other payments hereunder; *provided, however*, that, notwithstanding such termination, (i) except to the extent that Dell Technologies allocates a portion of its insurance costs to the VMware Entities, VMware shall remain liable to Dell Technologies for (1) the VMware Covered Parties' pro rata portion of those Insurance Expenses and (2) any Recovery Expenses, which Dell Technologies has incurred in connection with Insurance Coverage for the benefit of the VMware Covered Parties pursuant to Dell Technologies Insurance Policies or Covered Insurance Policies for the period prior to the effective date of such termination, (ii) VMware shall remain entitled to recoveries from the Covered Insurance Policies and the Dell Technologies Insurance Policies in respect of Insured VMware Liabilities covered by such policies prior to the effective date of such terminations and (iii) the provisions of Section 2.08, Article III, this Article IV and Article V shall survive any such termination indefinitely.

ARTICLE V
MISCELLANEOUS

Section 5.01 Other Agreements. In the event there is any inconsistency between the provisions of this Agreement and the respective provisions of the Master Transaction Agreement, the provisions of this Agreement shall govern.

Section 5.02 No Agency. Nothing in this Agreement shall constitute or be deemed to constitute a partnership or joint venture between the Parties hereto or constitute or be deemed to constitute any Party the agent or employee of the other Party for any purpose whatsoever, and neither Party shall have authority or power to bind the other Party or to contract in the name of, or create a liability against, the other Party in any way or for any purpose.

Section 5.03 Force Majeure.

(a) For purposes of this Section 5.03, “**Force Majeure**” means an event beyond the control of either Party, which by its nature could not have been foreseen by such Party, or, if it could have been foreseen, was unavoidable, and includes without limitation, acts of God, storms, floods, riots, fires, sabotage, civil commotion or civil unrest, interference by civil or military authorities, acts of war (declared or undeclared) and failure of energy sources.

(b) Continued maintenance of Insurance Coverage for the benefit of the VMware Covered Parties pursuant to the Dell Technologies Insurance Policies may be suspended immediately to the extent caused by Force Majeure. The Party claiming suspension of such Insurance Coverage due to Force Majeure will give prompt notice to the other of the occurrence of the event giving rise to the suspension and of its nature and anticipated duration. The Parties shall cooperate with each other to find alternative means and methods for the provision of the suspended insurance coverage.

(c) Without limiting the generality of Section 2.08, neither Party shall be under any liability for failure to fulfill any obligation under this Agreement, so long as and to the extent to which the fulfillment of such obligation is prevented, frustrated, hindered, or delayed as a consequence of circumstances of Force Majeure.

Section 5.04 Entire Agreement. This Agreement (including the schedules constituting a part of this Agreement) and any other writing signed by the Parties that specifically references or is specifically related to this Agreement constitute the entire agreement among the Parties with respect to the subject matter hereof and supersede all prior agreements, understandings and negotiations, both written and oral, between the Parties with respect to the subject matter hereof. This Agreement is not intended to confer upon any Person other than the Parties hereto any rights or remedies hereunder.

Section 5.05 Information. Subject to applicable law and privileges, each Party hereto covenants with and agrees to provide to the other Party all information regarding itself and transactions under this Agreement that the other Party reasonably believes is required to comply with all applicable federal, state, county and local laws, ordinances, regulations and codes, including, but not limited to, securities laws and regulations.

Section 5.06 Notices. Notices, offers, requests or other communications required or permitted to be given by either Party pursuant to the terms of this Agreement shall be given in writing to the respective Parties to the following addresses:

if to Dell Technologies or EMC:

Dell Inc.
One Dell Way, RR1-33
Round Rock, TX 78682
Attention: General Counsel

if to VMware:

VMware, Inc.
3401 Hillview Avenue
Palo Alto, CA 94304
Attention: General Counsel

or to such other address as the Party to whom notice is given may have previously furnished to the other in writing as provided herein. All notices shall be sent by hand delivery, recognized overnight courier or, within the United States, may also be sent via certified mail, return receipt requested. All notices shall be deemed to have been given when received, if hand delivered; one working day after it is sent, if sent by recognized overnight courier; and three days after it is postmarked, if mailed first class mail or certified mail, return receipt requested, with postage prepaid.

Section 5.07 Governing Law. This Agreement, including the validity hereof and the rights and obligations of the Parties hereunder, shall be construed in accordance with and shall be governed by the laws of the state of Delaware applicable to contracts made and to be performed entirely in such state (without giving effect to the conflicts of laws provisions thereof).

Section 5.08 Severability. If any terms or other provision of this Agreement or the Schedules or exhibits hereto shall be determined by a court, administrative agency or arbitrator to be invalid, illegal or unenforceable, such invalidity or unenforceability shall not render the entire Agreement invalid. Rather, this Agreement shall be construed as if not containing the particular invalid, illegal or unenforceable provision, and all other provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either Party. Upon such determination that any term or other provision is invalid, illegal or unenforceable, the Parties shall negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent permitted under applicable law.

Section 5.09 Third Party Beneficiary. None of the provisions of this Agreement shall be for the benefit of or enforceable by any third party, including any creditor of any Person. No such third party shall obtain any right under any provision of this Agreement or shall by reasons of any such provision make any claim in respect of any Liability (or otherwise) against either Party hereto.

Section 5.10 Amendment. This Agreement may only be amended by a written agreement executed by both Parties hereto.

Section 5.11 Counterparts. This Agreement may be executed in separate counterparts, each of which shall be deemed an original and all of which, when taken together, shall constitute one and the same agreement.

Section 5.12 Authority. Each of the Parties represent to the other Party that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other actions, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is its legal, valid and binding obligation, enforceable against it in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

[Signature Page Follows]

IN WITNESS WHEREOF , the Parties have caused this Agreement to be signed by their duly authorized representatives.

DELL TECHNOLOGIES INC.

By: /s/Janet M. Bawcom
Name: Janet M. Bawcom
Title: SVP and Assistant Secretary

EMC CORPORATION

By: /s/Janet M. Bawcom
Name: Janet M. Bawcom
Title: SVP and Assistant Secretary

VMWARE, INC.

By: /s/Craig Norris
Name: Craig Norris
Title: VP and Assistant Secretary

VMware, Inc.
COMPUTATION OF RATIO OF EARNINGS (LOSSES) TO FIXED CHARGES
(in millions, except ratio data)

	For the Year Ended					Transition Period
	February 2, 2018	December 31, 2016	December 31, 2015	December 31, 2014	December 31, 2013	January 1 to February 3, 2017
Fixed Charges ⁽¹⁾						
Interest expense	\$ 76	\$ 29	\$ 28	\$ 26	\$ 6	\$ 3
Assumed interest element in rent	39	37	35	28	23	3
Total fixed charges	\$ 115	\$ 66	\$ 63	\$ 54	\$ 29	\$ 6
Earnings (losses)						
Earnings (losses) before taxes	\$ 1,801	\$ 1,473	\$ 1,213	\$ 1,048	\$ 1,147	\$ (35)
Fixed charges	115	66	63	54	29	6
Total earnings (losses)	\$ 1,916	\$ 1,539	\$ 1,276	\$ 1,102	\$ 1,176	\$ (29)
Ratios of earnings (losses) to fixed charges	16.7x	23.2x	20.2x	20.2x	41.7x	(5.1)x

⁽¹⁾ Fixed charges include (i) interest expense on borrowings and on our leased space for a Washington data center facility, for which VMware is considered to be the owner for accounting purposes and (ii) a reasonable approximation of the interest factor deemed to be included in rent expense. VMware includes interest expense recognized on uncertain tax positions in income tax provision; therefore, such interest expense is not included in the ratios of earnings to fixed charges.

SUBSIDIARIES OF VMWARE, INC.

SUBSIDIARIES	STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION
3401 Hillview LLC	Delaware
A.W.S. Holding, LLC	Delaware
AirWatch LLC	Delaware
Arkinnet Software Private Limited	India
Nicira, Inc.	Delaware
Taiwan VMware Information Technology LLC	Taiwan
VeloCloud Networks Private Limited	India
Velocloud Networks, LLC	Delaware
VMware Australia Pty Ltd	Australia
VMware Belgium	Belgium
VMware Bermuda Limited	Ireland
VMware Bulgaria EOOD	Bulgaria
VMware Canada Inc.	Canada
VMware Costa Rica Ltda.	Costa Rica
VMware Denmark ApS	Denmark
VMware Eastern Europe	Armenia
VMware France SAS	France
VMware Global, Inc.	Delaware
VMware Hong Kong Limited	Hong Kong
VMware Information Technology (China) Co. Ltd	China
VMware International Limited	Ireland
VMware International Marketing Limited	Ireland
VMware Israel Ltd.	Israel
VMware Italy S.r.l.	Italy
VMware Korea Co., Ltd.	South Korea
VMware Malaysia SDN. BHD.	Malaysia
VMware Marketing Austria GmbH	Austria
VMware Middle East FZ-LLC	Dubai
VMware Netherlands B.V.	Netherlands
VMware NZ Company	New Zealand
VMware Saudi Limited	Saudi Arabia
VMware Singapore Pte. Ltd.	Singapore
VMware Software e Serviços Brasil Ltda.	Brazil
VMware Software India Private Limited	India
VMware Spain, S.L.	Spain
VMware Sweden AB	Sweden
VMware Switzerland GmbH	Switzerland
VMware (Thailand) Co., Ltd.	Thailand
VMware Turkey Software Solutions and Services Company Limited	Turkey
VMware UK Limited	United Kingdom
VMware, K.K.	Japan
Wanova Technologies Ltd.	Israel
Wavefront, LLC	Delaware

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-145402, 333-159747, 333-179680, 333-189491, 333-194148, 333-206114, and 333-218640) and Form S-3 (No. 333-219940) of VMware, Inc. of our report dated March 29, 2018 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

San Jose, California
March 29, 2018

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Patrick Gelsinger, certify that:

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

Date: March 29, 2018

By: /s/ Patrick Gelsinger

Patrick Gelsinger
Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Zane Rowe, certify that:

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

Date: March 29, 2018

By: /s/ Zane Rowe

Zane Rowe
Chief Financial Officer and Executive Vice President
(Principal Financial Officer)

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

I, Patrick Gelsinger, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge, the Annual Report of VMware, Inc. on Form 10-K for the fiscal year ended February 2, 2018 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and the information contained in such Form 10-K fairly presents, in all material respects, the financial condition and results of operations of VMware, Inc.

Date: March 29, 2018

By: /s/ Patrick Gelsinger

Patrick Gelsinger
Chief Executive Officer
(Principal Executive Officer)

**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, Zane Rowe, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge, the Annual Report of VMware, Inc. on Form 10-K for the fiscal year ended February 2, 2018 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and the information contained in such Form 10-K fairly presents, in all material respects, the financial condition and results of operations of VMware, Inc.

Date: March 29, 2018

By: /s/ Zane Rowe

Zane Rowe
Chief Financial Officer and Executive Vice President
(Principal Financial Officer)