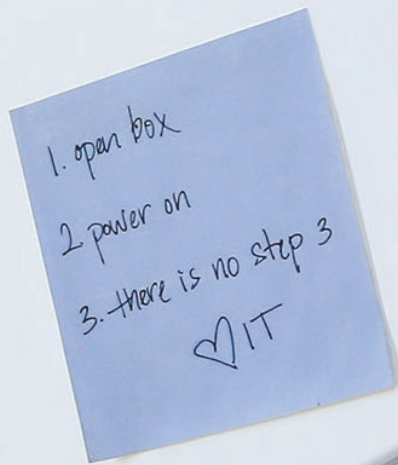




The Standard in Apple Enterprise Management



2022

ANNUAL REPORT

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended **December 31, 2022**

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from **to**

Commission File Number: 001-39399



JAMF HOLDING CORP.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

82-3031543

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

**100 Washington Ave S, Suite 1100
Minneapolis, MN 55401**

(Address of principal executive offices)

(612) 605-6625

(Registrant's telephone number, including area code)

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

<u>Title of each class</u>	<u>Trading symbol</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.001 par value per share	JAMF	The NASDAQ Stock Market LLC

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

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

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

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

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

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

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

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b).

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

The aggregate market value of the registrant's common stock held by non-affiliates as of June 30, 2022 was approximately \$1.6 billion (based on a closing price of \$24.77 per share).

On February 15, 2023, the registrant had 123,404,145 shares of common stock, \$0.001 par value, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement relating to the 2023 Annual Meeting of Stockholders are incorporated by reference in Part III of this Annual Report on Form 10-K. This Proxy Statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2022.

JAMF HOLDING CORP.
FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2022

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GLOSSARY

We use acronyms, abbreviations, and other defined terms throughout this annual report on Form 10-K. These terms are defined below. Jamf Holding Corp. and its wholly owned subsidiaries, collectively, are referred to as the “Company,” “we,” “us,” or “our.”

Term	Definition
2017 Credit Agreement	Credit agreement dated November 13, 2017, as amended, supplemented, or modified
2017 Option Plan	2017 Stock Option Plan
2017 Revolving Credit Facility	Revolving credit facility available under the 2017 Credit Agreement
2017 Term Loan Facility	Term loan facility incurred under the 2017 Credit Agreement
2020 Credit Agreement	Credit agreement dated July 27, 2020, as amended, supplemented, or modified
2020 Plan	Jamf Holding Corp. Omnibus Incentive Plan
2020 Revolving Credit Facility	Revolving credit facility available under the 2020 Credit Agreement
2021 ESPP	Jamf Holding Corp. 2021 Employee Stock Purchase Plan
2021 Term Loan Facility	364-day term loan facility incurred under the Credit Agreement Amendment
2026 Notes	Convertible Senior Notes due 2026
2026 Notes Indenture	Indenture governing the 2026 Notes
401(k) Plan	JAMF Software 401(k) P/S Plan
AAD	Azure Active Directory
ABE	Apple Business Essentials
ADR	Advanced Detection & Response
APIs	Application programming interfaces
ARR	Annual Recurring Revenue
ASC 350	ASC Topic 350, <i>Goodwill and Other Intangible Assets</i>
ASC 606	ASC Topic 606, <i>Revenue from Contracts with Customers</i>
ASC 718	ASC Topic 718, <i>Compensation — Stock Compensation</i>
ASC 740	ASC Topic 740, <i>Income Taxes</i>
ASC 805	ASC Topic 805, <i>Business Combinations</i>
ASC 820	ASC Topic 820, <i>Fair Value Measurement</i>
ASC 830	ASC Topic 830, <i>Foreign Currency Matters</i>
ASC 840	ASC Topic 840, <i>Leases</i>
ASC 842	ASC Topic 842, <i>Leases</i>
ASC 850	ASC Topic 850, <i>Related Party Disclosures</i>
ASP	Average selling price
ASU	Accounting Standards Update
ASU 2016-13	ASU No. 2016-13, <i>Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments</i>
ASU 2020-06	ASU No. 2020-06, <i>Debt — Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging — Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity</i>
AWS	Amazon Web Services
Board	Board of Directors
BYOD	Bring your own device
Capped Calls	Privately negotiated capped call transactions with third-party banks that were entered into in the third quarter of 2021
CARES Act	The Coronavirus Aid, Relief, and Economic Security Act

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CCPA	California Consumer Privacy Act
cmdSecurity	cmdSecurity Inc.
Code	The United States Internal Revenue Code of 1986, as amended
CODM	Chief operating decision maker
CPRA	California Privacy Rights Act
Credit Agreement Amendment	Incremental Facility Amendment No. 1 to the 2020 Credit Agreement, dated July 1, 2021
Current Period ARR	ARR from the same cohort of customers used to calculate Prior Period ARR as of the current period end
DGCL	Delaware General Corporation Law
Digita	Digita Security LLC
DTC	The Depository Trust Company
ERGs	Employee Resource Groups
ESG	Environmental, Social, and Governance
EU	European Union
EUR	Euro
Exchange Act	The Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
FCPA	U.S. Foreign Corrupt Practices Act of 1977, as amended
FTC	Federal Trade Commission
GAAP	U.S. generally accepted accounting principles
GBP	British pound sterling
GDPR	General Data Protection Regulation
IOC	Indicators of compromise
IPO	Initial public offering
IPR&D	In-process research and development
IS	Information security
IT	Information technology
JNGF	Jamf Nation Global Foundation
JNUC	Jamf Nation User Conference
Kext	Kernel extension
LTIP	Long-term incentive plan
MTD	Mobile threat defense
NASDAQ	NASDAQ Global Select Market
NOL	Net operating loss
Option counterparties	Certain financial institutions that entered into hedging positions with us in connection with the issuance of the 2026 Notes
Prior Period ARR	ARR from the cohort of all customers as of 12 months prior to period end
Proxy Statement	Proxy Statement relating to our 2023 Annual Meeting of Stockholders
ROU	Right-of-use
RSU	Restricted stock unit
SaaS	Software-as-a-service
SAFE	Simple agreement for future equity
SEC	Securities and Exchange Commission
Securities Act	The Securities Act of 1933, as amended
SIEM	Security information and event management

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SMBs	Small-to-medium-sized businesses
SSP	Stand-alone selling price
SOX	Sarbanes-Oxley Act of 2002
Termination Event	A change in control of the Company
UK	United Kingdom
UK – GDPR	UK – General Data Protection Regulation
U.S.	United States
Vista	Vista Equity Partners, LLC and its affiliates
Wandera	Wandera, Inc.
Wandera Merger Agreement	Agreement and Plan of Merger, dated as of May 5, 2021 in connection with the acquisition of Wandera
ZecOps	ZecOps, Inc.
ZecOps Merger Agreement	Agreement and Plan of Merger, dated as of September 23, 2022 in connection with the acquisition of ZecOps
ZTNA	Zero Trust Network Access
ZuluDesk	ZuluDesk B.V.

Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements that are subject to risks and uncertainties. All statements other than statements of historical fact included in this Annual Report on Form 10-K are forward-looking statements. Forward-looking statements give our current expectations and projections relating to our financial condition, results of operations, plans, objectives, future performance, and business. You can identify forward-looking statements by the fact that they do not relate strictly to historical or current facts. These statements may include words such as “anticipate,” “estimate,” “expect,” “project,” “plan,” “intend,” “believe,” “may,” “will,” “should,” “can have,” “likely,” and other words and terms of similar meaning in connection with any discussion of the timing or nature of future operating or financial performance or other events. For example, all statements we make relating to our estimated and projected costs, expenditures, cash flows, growth rates, and financial results or our plans and objectives for future operations, growth initiatives, or strategies are forward-looking statements.

We derive many of our forward-looking statements from our operating budgets and forecasts, which are based on many detailed assumptions. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and it is impossible for us to anticipate all factors that could affect our actual results. Important factors that could cause actual results to differ materially from our expectations, or cautionary statements, are disclosed under “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this Annual Report on Form 10-K. All written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by these cautionary statements as well as other cautionary statements that are made from time to time in our other SEC filings and public communications. You should evaluate all forward-looking statements in the context of these risks and uncertainties.

We caution you that the important factors referenced above may not contain all of the factors that are important to you. In addition, we cannot assure you that we will realize the results or developments we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our operations in the way we expect. The forward-looking statements included in this Annual Report on Form 10-K are made only as of the date hereof. We undertake no obligation to update or revise any forward-looking statement as a result of new information, future events, or otherwise, except as otherwise required by law.

Part I.

Item 1. Business

Our Purpose and Mission

Our purpose is to empower people by simplifying work. As a result, our mission is to help organizations succeed with Apple.

Overview

We are the standard in managing and securing Apple at work, and we are the only company in the world that provides a complete management and security solution for an Apple-first environment that is designed to be enterprise secure, consumer simple, and protective of personal privacy. We help IT and security teams confidently protect the devices, data, and applications used by their workforce, while providing employees with consumer-simple, privacy-protecting technology. With Jamf's software, devices can be deployed to employees brand new in the shrink-wrapped box, set up automatically and personalized at first power-on and administered continuously throughout the lifecycle of the device.

Jamf was founded in 2002, around the same time that Apple was leading an industry transformation. Apple transformed the way people access and utilize technology through its focus on creating a superior consumer experience. With the release of revolutionary products like the Mac, iPod, iPhone, and iPad, Apple built the world's most valuable brand and became ubiquitous in everyday life.

We believe employees have come to expect the same high-quality Apple user experience at work as they enjoy in their personal lives. This is often not possible as many organizations rely on legacy solutions to administer devices or do not give employees a choice of device. Unlike competitors, our software solutions are Apple-first and Apple-best to preserve and extend the native Apple experience, allowing employees to use their devices as they do in their personal lives, while retaining their privacy and fulfilling IT and Infosec's enterprise requirements around deployment, access, and security.

We have built our company through a primary focus on being the leading solution for Apple in the enterprise because we believe that due to Apple's broad range of devices, combined with the changing demographics of today's workforce and their strong preference for Apple, that Apple will become the number one device ecosystem in the enterprise by the end of this decade. We believe that the enterprise management provider that is best at Apple will one day be the enterprise leader, and that Jamf is best positioned for that leadership. Through our long-standing relationship with Apple, we have accumulated significant Apple technical experience and expertise that give us the ability to fully and quickly leverage and extend the capabilities of Apple products, operating systems, and services. This expertise enables us to fully support new innovations and operating system releases the moment they are made available by Apple. This focus has allowed us to create a best-in-class user experience in the enterprise and grow to more than 71,000 customers deploying 30.0 million devices in more than 100 countries and territories as of December 31, 2022.

We sell our SaaS solutions via a subscription model, through a direct sales force, online, and indirectly via our channel partners, including Apple. Our multi-dimensional go-to-market model and cloud-deployed offering enable us to reach all organizations around the world, large and small, with our software solutions. As a result, we continue to see rapid growth and expansion of our customer base as Apple continues to gain momentum in the enterprise. Our customers include many highly recognizable brands and organizations including Apple itself, 9 of the largest 10 Fortune 500 companies, 7 of the top 10 Fortune 500 technology companies, 22 of the 25 most valuable brands (according to the Forbes Most Valuable Brands rankings), the 15 largest U.S. banks (based on total assets according to bankrate.com), the top 10 global universities (according to U.S. News and World Report), 8 of the 10 largest U.S. school districts (according to Niche), and 17 of the 20 top U.S. hospitals (according to U.S. News and World Report) as of December 31, 2022. Additionally, we see opportunities to sell add-on products from our software platform into our current install base in order to provide greater value for our customers. Our focus on customer success and innovation has resulted in a Net Promoter Score of 57 as of November 2022, which significantly exceeds industry averages.

Complementing our software platform is Jamf Nation, the world's largest online community of IT and security professionals focused exclusively on Apple at work. This active, grassroots community serves as a highly-qualified and efficient crowd-sourced Q&A engine for anyone with questions about Apple deployments. This community selflessly acts as a resource for existing and potential customers and is also an important asset in providing feature feedback and ideas for our product roadmap.

Industry Background

Key trends impacting how enterprises use and manage technology to engage employees and drive productivity include:

Apple's democratization of technology

Apple is ubiquitous. It is the most valuable brand in the world according to Forbes, and in 2018, it became the first company to cross a market capitalization of \$1 trillion. Apple's success has been driven by delivering the best user experience to its customers through its innovative combination of hardware, software, and cloud services. It has transformed the technology landscape by placing the user first, creating a harmonious, interconnected experience across devices, and designing everything around maximizing the Apple user experience.

In the 1990s and early 2000s, endpoint technology was dominated by Microsoft Windows, particularly in the workplace. Many enterprises prioritized standardization over user experience in order to facilitate the deployment, security, and management of massive numbers of Windows PCs. Employees were not typically given a choice in their devices. In the 2000s, Apple introduced a series of revolutionary products that transformed how the world interacts with technology. Apple released the iPod in 2001, followed by the iPhone in 2007, and the iPad in 2010. These products, which utilized Apple iOS (Apple's proprietary mobile operating system), shared a design element that placed the user first. The rapid rise in popularity of iOS devices, combined with the proliferation of web-based applications, created a "halo effect," leading to a resurgence of Apple's Mac computer. These devices empowered users to easily leverage powerful technology regardless of their technical expertise. Apple's consumer-focused technology provided a significantly more capable, intuitive, and faster experience than the technology many employees previously had in the workplace.

Apple's focus on the user experience has transformed employees' expectations for technology overall. Employees expect a simple, intuitive, seamless experience that fosters creativity, productivity, and collaboration. Apple currently offers an entire ecosystem of desktops, laptops, tablets, phones, and wearable devices designed to interoperate seamlessly at home, at work, and everywhere in-between. This has made Apple the leading technology brand overall, according to a 2022 brand intimacy study by MBLM.

The consumerization of IT

The consumerization of IT refers to the migration of software and hardware products originally designed for personal use into the enterprise. Today, employees are often less inclined to draw a line between work and personal technology and commonly prefer not to settle for enterprise solutions that are harder to use than what they have at home. In response to the consumerization of IT movement, enterprises are transforming digitally to create a more engaged workforce, offering employees consumer-like tools and choice of technology brands. As the competition for talent escalates, we believe technology will play a central role in either improving or degrading the employee experience. Empowering employees to use their preferred devices is important to attract, engage, and retain productive employees. Today, with more organizations than ever before managing and onboarding new employees remotely, the technology experience and the employee experience are synonymous.

Rapidly evolving workplace demographics are also accelerating the consumerization of IT. In 2016, millennials surpassed Generation X to become the single largest generation in the U.S. labor force, according to a 2018 study by the Pew Research Center. Millennials are the first digitally-native generation that has grown up with broadband, smartphones, tablets, laptops, and a massive library of apps through which they interact with the world and each other. Millennials demand more from their enterprise IT organizations. They expect to work from anywhere at any time. They expect to be able to collaborate instantly. They expect to have a choice in the technology brand they use.

This trend is expected to continue as younger generations continue to enter the workforce and workplace technology continues to directly impact employment decision-making. In a 2021 survey conducted by Vanson Bourne and commissioned by us, 89% of workers are willing to make a salary sacrifice for device choice and nearly two-thirds would choose Apple.

Consumerization of IT has been one of the most significant trends impacting enterprise IT over the past decade. This trend is exemplified by Apple's iPhone, introduced in 2007. The iPhone was quickly preferred by many employees for its superior user experience compared to the corporate issued mobile phones controlled by enterprise IT departments. Mass consumer adoption of the iPhone pushed organizations to develop corporate policies that support the use of personal devices for work. As a result, Apple — the ultimate consumer technology company — has become critically important to enterprise IT organizations.

Apple's momentum in enterprise IT

Fueled by Apple's popularity and the consumerization of IT, Apple devices have gained widespread acceptance across the enterprise, from the executive suite to new hires. As a result, Apple market share in the enterprise has grown significantly. According to Apple CEO Tim Cook, Apple is now in every Fortune 500 company, and "eight in ten companies are writing custom apps for their enterprise." Apple's commitment to the enterprise has expanded through partnerships with enterprise giants, such as Accenture, Cisco, Deloitte, General Electric, IBM, Salesforce, and SAP.

Evidence of this momentum is further supported by Statcounter, an organization that aggregates data based on web traffic. According to Statcounter, Apple operating systems comprised 23% of global web traffic (both business and consumer) in December 2022, up from 4% in January 2009. Apple's gains in the U.S. have been even more significant, with Apple operating systems now representing over 41% of web traffic in December 2022, compared to 30% for Microsoft and 26% for Google. Over that same period, the market share of Microsoft in the U.S. has declined from 92% to 30%. And, according to IDC's Quarterly Personal Computing Device Tracker published in October 2022, Apple experienced over 40% growth from 2009 to 2022, while all other major brands saw their shipments fall in the same period.

The increased use of mobile devices to access the internet is largely responsible for the decline in market share of Windows over the past decade. Over this same decade, however, the Mac computer has grown in popularity and market share, further demonstrating that Apple's increased use is not limited to iOS devices. While the Mac computer was once primarily associated with creative or artistic activities, it now represents a growing share of computers within the enterprise. This wave of new Mac devices requiring seamless remote access to business apps and resources is causing friction among many enterprise IT support and management teams, which have historically focused more on Windows device management. Macs, of course, are not the entire story around Apple devices in the enterprise. According to IDC's September 2021 enterprise survey, iPhones were the most popular mobile OS among U.S. enterprise business users, and iPads made up the majority of tablets used in the enterprise.

Given the expectations of both current and future employees, offering employees a choice in technology brand is becoming imperative for many enterprises. Considering IDC's estimate of Mac enterprise penetration, we believe there is significant opportunity to fill the gap between how many employees want a Mac and how many currently use one.

Rise in remote and hybrid work

The COVID-19 pandemic accelerated the need for solutions to empower remote work, distance learning, and telehealth. While these trends were gaining mind share prior to the pandemic, the pandemic created momentum for these digital transformation changes that have fundamentally shifted expectations for technology products and services. Workflows that were once aspirational have become essential. For example, many companies with a remote or hybrid workforce need to ship devices directly from the manufacturer to the end user and have all the enterprise requirements fulfilled without IT ever touching the devices. While this workflow has been used by some organizations in the past to increase IT efficiency and smooth the user experience, it now has become a logistical and scalable advantage for device distribution. In healthcare, providers have used iPads to facilitate virtual inpatient care, serve patients at home, and connect isolated patients with loved ones. In education, digital technology continues to play an important role. These school districts require a solution that helps educators, students, and parents embrace distance learning technology. This sudden and significant shift from in-person to virtual interactions has forced these modern workflows into the mainstream. The vision of employee or student empowerment delivered through Jamf solutions can help organizations operate at the level they did before the necessity to conduct their business or function in a remote environment arose.

We believe these trends will continue. According to a 2022 Gallup study, COVID-accelerated remote work trends have persisted with 78% of remote-capable employed Americans working exclusively or partially remote. Now, the technology experience and the employee experience are synonymous.

The limitations of legacy enterprise solutions

Legacy solutions do not deliver the full Apple user experience because they are either outdated, overly Windows-centric, or treat all devices the same across operating systems. In particular, cross-platform solutions that treat devices the same tend to rely on the lowest common denominator technology that is shared across the relevant ecosystems. Apple, Microsoft, and Google have each introduced device-specific cloud services to automate enterprise IT processes. Fully embracing these cloud services demands specific focus on the respective ecosystem. Legacy solutions do not leverage the native capabilities of Apple and do not deliver the full Apple experience across several key areas, including the following:

- **Provisioning and deployment.** Legacy solutions commonly rely on processes, such as disk imaging, that are manual or time-intensive for IT departments and diminish the Apple user experience. As a result, IT departments need to spend additional time and effort setting up and configuring devices similar to a traditional PC deployment, and users receive a muted Apple experience that is overly complex and falls short of expectations.
- **Operating system updates.** Cross-platform legacy solutions are unable to allocate sufficient resources to always support the latest operating systems from all manufacturers. As a result, IT departments are forced to place moratoriums on operating system upgrades (through manually distributed emails) so they can test and then slowly roll out operating system upgrades weeks or months after they become available. This approach is contrary to Apple user expectations and also delays deployment of potentially important security updates which often results in such solutions not supporting the latest Apple operating system features and can cause security vulnerabilities that put an organization at risk. This is exacerbated with the release of Apple silicon on new Mac devices which revolutionizes its performance. Those not aligned with Apple and same-day support — be it management or security solution provider — are unable to support this new hardware which prevents users from being productive and protected.
- **Application licensing and lifecycle.** Cross-platform solutions offer limited options for application distribution and installation, which often require hands-on IT oversight. Microsoft, Apple, and Google each possess their own commerce solutions for third-party application purchases and distribution. Enterprise integrations for these commerce solutions require deep understanding of the platform and associated service. Cross-platform solutions have historically struggled to stay current with the standards of each platform's features.

Additionally, the enterprise requirements for security and privacy result in the need to wrap applications with middleware, such as containers, degrading Apple's intended user experience. License tracking in the cross-platform solution environment can also be manual. All of this effort creates extra and error-prone work for IT departments and dilutes the Apple user experience.

- **Endpoint protection.** Legacy solutions do not leverage Apple's native security tools and Endpoint Security framework, thereby providing limited visibility into an organization's fleet of devices and limited identification of potential security threats. Those not fully aligned with Apple's native security tools and Endpoint Security framework are unable to support the Apple silicon and cannot apply new restrictions in Apple's latest operating system, macOS Ventura, on Apple silicon devices.

In most cases, legacy solutions rely on endpoint protection solutions that were originally designed for Windows. As a result, these solutions deliver endpoint protection to devices in a manner which degrades the Apple user experience and performance and may not function properly in an Apple environment. In addition, the signature-based approach utilized by these solutions can only identify backward-looking threats specific to Microsoft and does not communicate with native Apple security tools that could identify more relevant and immediate threats.

With the acquisition of ZecOps completed in November 2022, Jamf also can provide endpoint protection for iOS devices. With the unique combination of Jamf Protect and ZecOps together, we believe Jamf provides the most comprehensive solution for Apple endpoint protection on the market.

- **Identity-based access to resources.** The concept of a workplace perimeter is quickly fading as employees demand flexibility to work from anywhere with seamless access to enterprise applications and resources. Enterprises need to make it simple for users to authenticate and access enterprise resources from anywhere with a single identity. To provide users access to corporate resources, many organizations bind their devices with AAD. While binding devices to AAD works well with Windows-based devices, it does not create an efficient experience for other ecosystems, including Apple. Additionally, to be able to service devices in the enterprise, IT often creates a secondary administrator account on each device that tends to become a management headache, user experience burden, and security risk.

For enterprise Apple deployments, the limitations of legacy solutions all add up to higher operational and support costs, greater security vulnerability, lower productivity, and a degraded user experience. While its devices may have higher upfront costs, implementing the full Apple experience results in higher productivity and lower total cost of ownership. Realizing these potential benefits requires an enterprise software solution specifically built for the Apple ecosystem.

Our Solution

We are the standard in managing and securing Apple at work, and we are the only company in the world that provides a complete management and security solution for an Apple-first environment that is designed to be enterprise secure, consumer simple, and protective of personal privacy. Our SaaS solutions provide a cloud-based platform for full lifecycle enterprise security and IT management of devices. We help IT and security teams confidently protect the devices, data, and applications used by their workforce, while providing employees with consumer-simple, privacy-protecting technology. Our solutions are purpose-built to provide both technical and non-technical IT personnel with a single software platform to administer their end-users' devices, while preserving the legendary Apple experience end users have come to expect. We believe that our success is born out of a primary focus on Apple and our commitment to optimizing the end-to-end user experience. As of December 31, 2022, we had more than 71,000 customers, over 24,000 of which became customers in the last two years, in more than 100 countries and territories.

We believe employees have come to expect the same high-quality Apple user experience at work as they enjoy in their personal lives. This is often not possible as many organizations rely on legacy solutions to administer devices or do not give employees a choice of device. Unlike competitors, our software solutions are Apple-first and Apple-best to preserve and extend the native Apple experience, allowing employees to use their devices as they do in their personal lives, while retaining their privacy and fulfilling IT and Infosec's enterprise requirements around deployment, access, and security. Our software platform provides the following key benefits:

- **Device provisioning and deployment.** We provide a scalable, zero-IT-touch deployment right out of the shrink-wrapped box, personalized for each end user. Our offering makes it possible for IT professionals to easily manage the traditionally challenging tasks of deployment, information encryption, and installing and updating software, without ever touching the device, both for corporate owned and BYOD devices. Jamf customer research has shown that our seamless cloud deployment capabilities lower the total cost of ownership of its devices, enable the native Apple experience in the enterprise, and ultimately make the devices more effective and secure.
- **Self-service.** We extend the Apple experience with a customizable enterprise self-service app that empowers end users to satisfy their own IT needs. With a single click, end users can install apps pre-approved by IT, request a new app, automatically resolve common technical issues, and easily connect and configure enterprise resources, like the nearest printer, without waiting for IT. While the end user experience is simple, the range of capabilities is immense. Our self-service app empowers users to be productive and self sufficient while simultaneously reducing the labor burden on IT.
- **Operating system updates.** Many Apple users expect immediate access to new features by upgrading the moment Apple releases a new operating system. Given our primary focus on Apple, we are able to offer robust, immediate support for operating system feature updates — including the new Apple silicon — so they can be effortlessly deployed on the same day they are released by Apple. IT teams have the flexibility to automate updates or let users initiate the updates, ensuring employees stay up-to-date with all of the latest security and privacy features, plus leverage new Apple hardware once available.
- **Application lifecycle and licensing.** We give IT teams the ability to automate key workflows related to the installation and deployment of both Apple App Store and third-party applications, all from the most expansive app catalog, ensuring a more efficient IT management process. These capabilities include automated targeted distribution of apps to employees based on their work needs, user-initiated app installation via a customized enterprise app store and automated volume purchasing and license management, and automated tracking, deployment, and updating of third-party applications.
- **Endpoint protection.** We safeguard and amplify device security through an enterprise endpoint protection solution purpose-built for Apple and mobile devices. Jamf endpoint protection is specifically designed to identify Apple and mobile targeted threats while preserving user experience and performance. Our software solution is built around the unique challenges that Apple and mobile devices face in enterprise security, with behavior-based detection and prevention of Apple-specific threats and enterprise visibility into native Apple security tools. Through close monitoring of a device's network communications, Jamf endpoint protection detects, blocks, and extends its protections to advanced security threats and phishing attacks. Jamf endpoint protection is architected using native Apple APIs and designed to co-exist within an organization's existing enterprise security solutions. By integrating with an organization's SIEM, rich telemetry data is streamed to give a complete view into an organization's fleet. We also make it easy to audit device security benchmarks to ensure that a trusted user on an

enrolled device remains in compliance with an organization's required security settings. With constant monitoring of endpoints for threats to automatically block and quarantine malware, Jamf keeps endpoints protected and corporate data safe.

- **Identity-based access to resources.** We enable end users to easily and securely connect to enterprise resources with a single cloud-based identity credential. End users can then immediately access all their corporate applications and shared resources. This eliminates the time-consuming need for multiple logins, reduces the number of IT tickets for password-related issues (which are frequently the leading cause of IT tickets), and removes the need for IT administrators to bind devices to AAD. Additionally, Jamf can dynamically block or grant administrative rights on the Apple device itself based on an end user's cloud-based identity, thus removing the need for additional administrator accounts on the device.
- **Network risk management.** Regardless of end-user device type, network security is critical, especially with remote work and as workers expect to access company resources anywhere at any time. Jamf replaces legacy conditional access and VPN technology to deliver true ZTNA. It ensures that after a user authenticates their device, business connections are secured while enabling non-business applications to route directly to the internet. This preserves end-user privacy and optimizes network infrastructure. We are focused on securing connections, regardless if the end user leverages Apple or another device type. Network security is an extension of the Apple experience, and Jamf is focused on protecting every connection point.

Our software platform provides value to both end users and IT departments. Users receive the legendary Apple experience they expect, and IT departments can empower employees, enhance productivity, and lower total ownership cost. According to a July 2021 Apple-commissioned study conducted by Forrester Consulting, *The Total Economic Impact Of Mac In Enterprise: M1 Update*, an M1 Mac in the enterprise results in \$843 cost savings per device versus a comparable PC (when considering three-year hardware, software, support, and operational costs), a 20% improvement in employee retention, and a 5% increase in productivity of all employees. An M1 Mac also results in 48 hours of increased productivity per employee over three years. These metrics result in a payback period of less than six months for an M1 Mac.

Furthermore, 2021 Jamf customer research, conducted by Hobson & Company and commissioned by us, found benefits from simplifying IT management, reducing the time spent provisioning devices, the time spent on ongoing device management, and the time spent managing apps all by 90%. Additionally, that research found Jamf improved end-user experience, reducing end-user productivity loss due to technical problems by 90% and the time spent on IT help desk tickets by 70%. According to this research, Jamf also helped mitigate risk by reducing the time IT spent remediating incidents and vulnerabilities by 70%. Overall, Hobson & Company found that a typical organization could expect a 781% three-year return on investment and a 2.7 month payback period when using Jamf.

Our Relationship with Apple

Jamf was founded in 2002 with the sole mission of helping organizations succeed with Apple, making it the first Apple-focused device management solution. Today, we have become the only company in the world that provides a complete management and security solution for an Apple-first environment that is enterprise secure, consumer simple, and protects personal privacy. Our relationship with Apple has endured and grown to be multi-faceted over the past 21 years.

To continuously offer a software solution built specifically for Apple, we have always worked closely with Apple's worldwide developer relations organization in an effort to support all new Apple innovations the moment their hardware and software is released. Additionally, throughout the course of our relationship, Jamf and Apple have formalized several contractual agreements:

- **Apple as a customer.** In 2010, Apple became a Jamf customer, using our software solution to deploy and secure its fleet of devices internally. For the year ended December 31, 2022, Apple as a customer represented less than 1% of our total revenue.
- **Apple as a channel partner in education and in retail.** In 2011, Apple became a Jamf channel partner in the education market, reselling our software solution to K-12 and higher education organizations within the U.S. In 2012, Apple expanded their channel relationship by offering our software solution to businesses through Apple retail stores in the U.S. For the year ended December 31, 2022, Apple as a channel partner facilitated approximately 1% of our bookings.

- **Mobility Partner Program.** In 2014, we became a member of Apple’s Mobility Partner Program, which focuses on solution development and effective go-to-market activities.

Each of these contractual relationships continue to this day and span all enterprise technology across the Apple ecosystem, including Mac, iPad, iPhone, and Apple TV. In addition to these contractual relationships, Apple and Jamf personnel frequently join forces to influence and collaborate as we work with customers, helping them succeed with Apple. One example of this is at JNUC, our annual conference and the world’s largest gathering of Apple administrators, where Apple has presented various sessions and on our main stage since the conference’s inception.

Market Opportunity

We believe our solutions address a large and growing market covering the use of Apple technology in the enterprise. Based on Frost & Sullivan data, Jamf’s global Total Addressable Market was estimated to be approximately \$35 billion in 2022. This market represents the potential number of Apple mobile phones (iPhones), tablets (iPads), and laptop and desktop computers (Macs) based on growing acceptance by education and business IT departments. Additionally, this market includes the potential number of non-Apple devices that could run one or more of Jamf’s security solutions. Frost & Sullivan includes both devices purchased and provided by enterprises as well as BYODs owned by end users that may require a management and security solution to provide necessary access to resources or services from the enterprises. The potential device numbers are multiplied by the Jamf ASP for each device and enterprise type.

Our Strengths

The following are key strengths which contribute directly to our ability to create value for customers, employees, partners, and stockholders:

- **Long-standing relationship with and primary focus on Apple.** We are the only vertically-focused Apple infrastructure and security platform of scale in the world, and we have built our company through a primary focus on being the leading solution for Apple in the enterprise. We have a collaborative relationship with Apple which, combined with our accumulated technical experience and expertise, gives us the ability to leverage and extend the capabilities of Apple products, operating systems, and services fully and quickly. This expertise and collaboration with Apple development programs enables us to fully support new Apple innovations and operating system releases the moment they are made available by Apple.
- **Strong support from Jamf Nation.** Jamf Nation is the world’s largest online community of IT and security professionals exclusively focused on Apple in the enterprise. This active, grassroots community serves as a highly-qualified and efficient crowd-sourced Q&A engine for anyone with questions about Apple and Jamf deployments. Each year we celebrate this community through a customer event called JNUC. During the most recent JNUC in fall of 2022, over 3,300 people attended from over 50 countries. This community of loyal Jamf supporters acts as a resource for existing and potential customers and is also an important asset in providing feature feedback and ideas for our product roadmap. Jamf Nation also serves as an efficient way to introduce potential customers to the Jamf brand and solutions.
- **Standard for Apple in the enterprise.** As the only company in the world that provides a complete management and security solution for an Apple-first environment, we are the standard for Apple in the enterprise. This is evidenced by our growing number of more than 71,000 customers as of December 31, 2022, including 22 of the 25 most valuable brands (according to the Forbes Most Valuable Brands rankings). In addition, hundreds of independent customer ratings on popular software review websites, including Gartner Peer Insights, G2Crowd, and Capterra, have earned Jamf recognition as the “Customers’ Choice.” Through our intense focus on connecting, managing, and protecting devices, we are able to provide a differentiated solution when compared to other cross-platform providers who attempt to satisfy all requirements for all platforms.
- **Strong partner ecosystem.** Our meaningful expertise managing the Apple ecosystem and our unique understanding of enterprise customers have motivated us to publish a large catalog of open APIs so our customers can integrate and extend their existing software solutions. It is upon this robust APIs catalog that we have built a strong partner ecosystem that includes hundreds of integrations and solutions made available in our Jamf Marketplace.

In addition to our developer partners, we have relationships with solution partners. One example is the work we have done to integrate our products with Microsoft (Intune, AAD, and Azure Sentinel), Amazon (AWS), and Google (Google Cloud Identity, BeyondCorp Enterprise Conditional Access). Development activities with Microsoft have resulted in solutions that optimize the Apple ecosystem within a Microsoft-centric enterprise. Jamf's authentication and account management solutions have deep integrations with AAD. Additionally, customers can sync their Jamf inventory data with Microsoft Intune, providing a consolidated view of all devices from all manufacturers in the organization's fleet. This integration provides customers with simple and unified visibility. In addition, the integration provides tremendous operational benefits, including enforcing compliance policies, ensuring only compliant devices can gain access to protected company resources like Office 365, and helping users remediate their device compliance issues via Jamf's self-service application. Jamf also natively integrates with Microsoft Azure Sentinel to push all security-related data and alerts directly into the SIEM of choice for Microsoft-focused organizations.

Development activities with AWS have resulted in solutions that strengthen organizational security by improving threat prevention measures and reducing risk of data breaches, while simplifying security controls. With Jamf and AWS Verified Access, organizations using AWS and Jamf can verify that devices are managed and meet an acceptable risk threshold before providing access to sensitive or critical internal services. Defined policies can be flexible according to organizational requirements and overall level of security risk tolerance.

Jamf also integrates with Google Cloud Identity to power Mac account provisioning and authentication with Google Cloud, which allows IT admins to easily set up and manage local Mac accounts and require users to authenticate with their G-Suite credentials. And Jamf's integration with BeyondCorp brings macOS compliance to Apple IT teams using Jamf and Google Cloud. Through this partnership, organizations can ensure that only trusted users from managed computers are appropriately accessing Google Workspace and other resources protected by Google Cloud's BeyondCorp Enterprise.

- ***Effective go-to-market capabilities.*** The combination of our strong partner ecosystem (including Apple, AWS, and Microsoft), our e-commerce capability, and our extensive enterprise and inside sales organizations has created a differentiated and powerful go-to-market approach. We believe this robust go-to-market structure allows us to effectively and efficiently reach our entire addressable market, including both large and small organizations in all geographic regions throughout the world. This also allows us to “land and expand” within our customer base by beginning with a limited engagement at each customer and increasing that customer relationship over time.
- ***Differentiated technology.*** While Jamf technology has many powerful capabilities built to help promote digital transformation and satisfy the challenging requirements of connecting, managing, and protecting Apple in the enterprise, specific innovations that set us apart from others in the market include:
 - ***Powerful architected-for-Apple agent.*** Apple IT administrators can access remote computers and file systems, collecting attributes and intelligence as if they were sitting with every Apple device in their fleet.
 - ***Enterprise attributes and smart grouping.*** Through our smart grouping technology, Jamf can dynamically group devices, based on standard attributes, enterprise attributes, or a combination thereof to target and execute business workflows at scale.
 - ***Leading security capabilities that extend cross-platform.*** Jamf is the only endpoint security vendor with natively integrated network security and secure connections to remote applications.
 - ***Industry-specific workflows.*** We have created industry-specific workflows that go beyond device management to solve issues for industries such as education, healthcare, and hospitality, including solutions built around remote work, distance learning, and telehealth.
 - ***High performance native Apple APIs.*** Jamf creatively utilizes extensive APIs from published Apple technologies which allows us to be ready instantly with each new Apple operating system.
 - ***Enterprise self-service.*** Our simple-to-use enterprise self-service solution enables IT to empower end-users with a privately brandable application that allows users to provision their own device, install approved apps, and perform complex tasks from a personalized enterprise catalog.

Our Growth Strategy

We help organizations succeed with Apple by connecting the Apple experience with the needs of the enterprise. By preserving and enhancing the Apple experience in an enterprise context, we believe we can drive our growth within the current Apple ecosystem as well as fuel further Apple penetration in enterprises, which will extend our opportunity. The key elements of our growth strategy include:

- ***Extend technology leadership through R&D investment and new products.*** We intend to continue investing in research and development and pursuing select technology acquisitions to enhance our existing solutions, add new capabilities and deployment options, and expand use cases. For example, one use case we recently brought a solution to the market for is the rise in employees using their personal devices for work. We announced our BYOD solution in March 2022 to help organizations manage and secure personally owned devices that employees bring to work, while upholding employee personal privacy. We believe this strategy of continued innovation will allow us to reach new customers, cross-sell to existing customers, and maintain our position as the standard for Apple in the enterprise. In addition, many organizations with Apple also have non-Apple devices. The solutions they use to connect, manage, and protect devices, users, and data can vary in platform-centricity (i.e. the level of focus centered on a specific platform, like Apple) as you move from the device to the network. As you move further away from device-level capabilities and move closer to cloud security and identity functions like network security and identity-based focus, the broader our focus is, and that's where solutions that offer cross-platform support, such as Jamf Private Access, provide Jamf with the ability to capture Windows and Android users in addition to our Apple base.
- ***Deliver unique industry-specific innovation.*** We intend to continue developing and enhancing Apple-specific functionality for certain verticals, such as education, healthcare, and hospitality, to help these organizations serve the changing needs of students, teachers, patients, and workers. For example, our patented mobile-to-mobile management technology provides teachers and parents control over school-issued iPads — whether they are ten feet or ten miles away. We have patented healthcare listener functionality that empowers hospitals to launch device workflows based on events in the electronic medical record, giving patients access to their care plans and control over their room environment through a hospital-issued iPad. We also have a patented telehealth workflow, Virtual Visits, aimed to protect providers while still connecting patients to care and their communities. Providers can virtually round their patients, and patients can connect with families outside the hospital without IT ever having to touch the device. Once patients are discharged, Virtual Visits can help to automatically digitally wipe the device to prepare it for the next patient. We believe targeted, vertical-specific functionality can help us further penetrate industries which already use devices or provide a differentiated solution to enter a new industry or solve a new use case.
- ***Grow customer base with targeted sales and marketing investment.*** We aim to expand our customer base by continuing to make significant and targeted investments in our direct sales and marketing to attract new customers and drive broader awareness of our software solutions. In addition, with our expanded platform, we can reach beyond our historical sales efforts focused on IT executives and administrators and sell to Chief Information Officers, Chief Information Security Officers, and line-of-business leaders. We also plan to increase our channel sales and marketing organization to deepen and expand our joint go-to-market efforts through partners, including resellers, managed service providers, global systems integrators, carriers, and the Apple consultant network, in order to reach new territories and further scale our business through their loyal customer network and expert service delivery. We believe the channel is an efficient way to sell to a wide variety of customers and reach new jurisdictions in a cost-effective manner while still focusing on customer satisfaction and retention.
- ***Increase sales to existing customers.*** We believe our base of more than 71,000 customers as of December 31, 2022 represents a significant opportunity for sales expansion. Our opportunities to deliver further value to existing customers include (1) growing the customers' number of devices currently in use; (2) selling additional Jamf products; (3) expanding customers' use of Jamf from one Apple product, like Mac, to additional Apple products used within the organization, like iPad, iPhone, and Apple TV; and (4) expanding the way customers use Apple products by showcasing capabilities available once customers fully embrace Jamf for deployment. Additionally, Apple continues to grow their ecosystem of solutions that can bring value to organizations, as they did with the introduction of tvOS management in 2017, making the Apple TV an attractive product to deliver new use cases in conference rooms, classrooms, hospitality environments, and for digital signage across a range of industries. The strength of Jamf's "land and expand" strategy is evidenced by the approximately 13,500 customers that are now

running both a Jamf management and security product as of December 31, 2022 as well as our dollar-based net retention rate of 113% as of December 31, 2022, calculated on a trailing twelve months basis.

- **Expand global presence.** We have a large international presence which we intend to continue growing. For the year ended December 31, 2022, approximately 36% of our new subscriptions originated outside of North America, compared to 34% for the prior year. We intend to continue making investments in our international sales and marketing channels to take advantage of this market opportunity, while refining our go-to-market approach based on local market dynamics. Furthermore, we will invest in our products and technology to fulfill the unique needs of the market we target.
- **Grow and nurture Jamf Nation.** Jamf Nation is the world’s largest online community of IT and security professionals focused exclusively on Apple at work. It consists of a knowledgeable and active community of Apple-focused administrators and Jamf users who come together to gain insight, share best practices, vet ideas with fellow administrators, and submit product feature requests. We intend to continue investing in our community platform and these relationships to ensure that our Jamf Nation community remains a vibrant forum for discussion and problem solving for our users. We believe this community will continue to be a focal point for the Apple ecosystem and can also be helpful in introducing Jamf to potential new customers.
- **Cultivate relationships with developer partners.** We believe one of the most powerful elements of our software platform is the ability to use published APIs to extend its value with other third-party or custom solutions. As of December 31, 2022, approximately 270 integrations and value-added solutions were published on the Jamf Marketplace. These solutions extend the value of Jamf, protect customers’ existing IT investments and encourage greater use and expansion of Jamf within the enterprise.

Our Products

We provide industry-leading software solutions that help empower users with Mac, iPad, iPhone, and Apple TV. We deploy our solutions through the following main products. The graphic reflects our current grouping of products, which was updated in January 2023.

		
<h2 data-bbox="245 1182 451 1241">Manage</h2> <ul style="list-style-type: none"> <li data-bbox="191 1272 496 1356">→ Jamf Pro The Apple management standard. Built for IT Pros. <hr/> <li data-bbox="191 1419 529 1503">→ Jamf Now Streamlined device management, no IT required. <hr/> <li data-bbox="191 1566 472 1682">→ Jamf School Empowering educators with efficient classroom management. 	<h2 data-bbox="675 1182 857 1241">Secure</h2> <ul style="list-style-type: none"> <li data-bbox="610 1272 911 1419">→ Jamf Connect Streamlined provisioning, authentication, identity management and modern zero trust access. <hr/> <li data-bbox="610 1482 911 1598">→ Jamf Protect Endpoint security, web filtering, mobile threat defense and remediation. <hr/> <li data-bbox="610 1661 927 1776">→ Jamf Safe Internet Purpose-built content filtering and network threat protection for education. <hr/> <li data-bbox="610 1839 943 1923">→ ZecOps Advanced detection & response for mobile devices. 	<h2 data-bbox="1118 1182 1300 1241">Extend</h2> <ul style="list-style-type: none"> <li data-bbox="1019 1272 1357 1356">→ Education Teacher, Student, Parent and Assessment apps <hr/> <li data-bbox="1019 1419 1349 1535">→ Healthcare <ul style="list-style-type: none"> • Healthcare Listener • Clinical Communications • Virtual Visits <hr/> <li data-bbox="1019 1598 1341 1682">→ X Industry Setup and Reset for Shared Devices and Workflows <hr/> <li data-bbox="1019 1745 1325 1797">→ Developer Workflows Jamf API and Marketplace

Jamf Pro

Jamf Pro, Jamf's flagship product, offers a robust Apple ecosystem management software solution for complex IT environments, serving both commercial businesses and educational institutions. Since its introduction in 2002, Jamf Pro has been our flagship product, serving the largest portion of Jamf's customer base. Despite its 20-year history, Jamf Pro is still growing in commercial markets, experiencing a 20% year-over-year increase in the number of devices under management for the year ended December 31, 2022.

Key capabilities of Jamf Pro include:

- providing a seamless initial device deployment, giving companies the ability to choose between a zero-touch experience or offering a more hands-on device enrollment and deployment;
- enrolling personally owned devices with support of Apple's user enrollment workflows, allowing for management of corporate resources while maintaining the user's personal privacy;
- enabling customization of devices beyond configuration profiles, use policies, and scripts for the optimal user experience;
- facilitating pre-configuration of user settings before deployment;
- providing app management flexibility wherein apps can be made available automatically to users or through an enterprise self-service catalog;
- granting users the ability to update software and maintain their own devices through Jamf's brandable self-service application without an IT help desk ticket;
- automating ongoing inventory management, such as automatic collection of hardware, software, and security configuration details from devices, creating custom reports and alerts, and managing software licenses and warranty records; and
- securing devices by leveraging native security features, such as encryption, managing device settings and configurations, restricting malicious software, and patching all devices without the need for user interaction.

Jamf Now

Jamf Now is an intuitive, pay-as-you-go Apple device management and security software solution for SMBs. Jamf Now prioritizes simplicity through a design that is targeted for organizations with limited or no IT resources, and it can be adopted by such organizations without engaging Jamf sales, training, or services personnel. Jamf Now allows customers to set up their own accounts to enroll their devices and immediately benefit regardless of any prior experience with Jamf. Jamf Now facilitates the consistent configuration of devices remotely, provides a 360-degree view of inventory, and remotely enforces passcodes, encryption, installed software, and locking or wiping of devices. Jamf also makes it easy to leverage its other solutions within Jamf Now with an enhanced tier of service that offers additional management features as well as compelling security features such as password syncing with cloud identity providers as well as malware prevention, which helps prevent malicious software and other threats from running on Mac devices in an environment. Jamf Now users can also access our self-service app, which allows users to connect to the App Store and third-party apps through an on-demand Mac App catalog. These capabilities better equip SMBs with key functionality to manage and secure their Apple devices.

Jamf School

Jamf School is a purpose-built software solution for educators and is supported by value-add workflow apps that empower teachers to create a focused, active, and personal learning environment. We have a long and successful presence in the education market, dating back to the early 2000s, and we introduced Jamf School in early 2019 following the acquisition of ZuluDesk. Launching Jamf School significantly increased our value in the classroom and allows us to further empower teachers, students, and even parents.

Teachers using Jamf School can quickly and easily control all devices in their classroom, which aids students' focus. Teachers design lesson templates leveraging content from Apple's App Store combined with their own teaching materials to

meet their curriculum needs to then easily deploy these lessons to students. They can also restrict specific functions during assessments and control what content and resources students have access to on their iPads at a specific time. This functionality works seamlessly whether the teacher and student(s) are in the same physical classroom or if they are learning from home or in various locations. Teachers can also start remote lessons within the app, using Apple's FaceTime or other video conferencing tools.

With Jamf School, parents can use their personal iPhone, iPad, Apple Watch, or Android device to govern the access children have when using their school-issued iPads at home. Parents can control and limit their children's device usage, applications, and functionality when the student is not in school. Jamf School transforms processes that once required IT involvement into dynamic interactions that put the power in the hands of the people who have the greatest impact on meeting each student's learning needs.

Jamf School also engages and connects the student. Students can gain automatic access to subject-specific materials and applications, while unrelated or irrelevant content is hidden to avoid distraction. Through a self-service portal, students can also choose applications from an approved list of content, empowering them to control their learning. Teachers and parents can be confident students are focused and connected, which is specifically important in situations where students may bring their devices home or have prolonged control of their devices outside of the school district's possession.

Jamf Connect

Jamf Connect enables modern, remote access and allows IT admins to provision devices with business-critical applications based solely on an employee's cloud identity. Users will enjoy a seamless experience when accessing their device and applications by using a single password that is synchronized down to the local-account level, even when the password is changed — keeping employees on task. Jamf Connect transforms how users connect to their corporate identity and therefore provides users with a seamless connection to corporate resources.

Jamf Connect gives IT administrators the ability to monitor all company Mac devices and control who is accessing them, providing comfort that both the device and corporate information are protected. Jamf Connect substantially improves the user experience by reducing IT help desk tickets for password resets. Also, IT administrators can service each device using their cloud identity without requiring a separate admin account on the device, which is a management headache, security vulnerability, and user experience hazard.

Included with Jamf Connect is a ZTNA solution that replaces legacy conditional access and VPN technology. More employees than ever before are working from different locations and on various devices. Organizations need to be able to ensure secure access to company resources as devices are rarely being connected from within a traditional network perimeter. Jamf Private Access ensures that, after a user authenticates into their device, business connections are transparently secured while enabling non-business applications to route directly to the internet, preserving end-user privacy, maintaining the end-user experience without slowing it down, and optimizing secure network infrastructure. This solution works across device ecosystems and signifies Jamf's expansion into cross-platform capabilities.

Jamf Protect

Jamf Protect provides purpose-built endpoint security and MTD for Mac and mobile devices that allows organizations to maintain compliance, defend against the modern threat landscape, and identify and respond to security incidents, giving enterprise security teams unprecedented visibility into their devices, extending Apple's security and privacy model to the enterprise while upholding the Apple user experience.

Based on historical needs, most endpoint security products have been designed for Windows and ported to Apple environments only when necessary. Jamf Protect was specifically designed to protect a customer's fleet of Apple devices by leveraging in-depth knowledge of how adversaries attack Apple.

As market share for the Mac computer has grown in the enterprise, attackers have started focusing on and innovating attacks targeted to Macs. It is no longer sufficient to protect these devices with a solution designed for a different platform.

Mac security features include:

- mapping the security posture of a customer's Mac fleet against the Center for Internet Security benchmarks;

- preventing execution and quarantining of known macOS threats and unwanted applications to keep end users safe;
- extending information security visibility into macOS built-in security tools for awareness and improved reporting, compliance, and security;
- collecting critical data necessary for incident investigation to meet the most stringent logging and auditing standards, including tools required to capture required endpoint telemetry and stream that critical data to customer-owned data repositories and SIEMs;
- mitigating network-based threats and block risky and inappropriate content, while preserving end-user experience;
- receiving real-time alerts to analyze activity on the device and choose whether to proactively block, isolate, or remediate threats;
- providing granular control to information security teams over what data is collected and where it is sent, and allowing companies that monitor endpoint activity for compliance reasons to gather authentication and other activity tracked by macOS into their system of record; and
- supporting the latest operating system from the first day it's available to ensure end users receive the latest and most pressing security updates, while providing the user with a superior macOS experience.

Jamf Protect also protects mobile workers from malicious attackers with minimal impact to the user experience by monitoring a device's network activity. Jamf Protect prevents iOS, Android, and Windows endpoints from being compromised through mobile threat detection and zero-day phishing prevention with a streamlined app for notifications and remediation. Jamf Protect operates across a diverse range of devices and ownership models, whether BYOD, corporate-owned personally enabled, or corporate-owned business-only, empowering end users with their preferred model in a way that protects the business.

Jamf Protect also enforces acceptable usage policies to eliminate shadow IT and block risky content and manage data consumption with real-time analytics and granular reporting. Features include:

- configuring caps for when data usage thresholds are reached and setting real-time alerts and notifications for users and admins;
- setting rules to ensure only acceptable websites can be reached and data usage is compliant;
- implementing and enforcing policies to manage data usage based on locations;
- compressing data in real time to tackle rising data consumption without cutting performance or productivity;
- setting policies that apply to distinct groups in different circumstances; and
- accommodating all mobile and Windows 10 devices, allowing users to work with their preferred model.

Jamf Safe Internet

Jamf Safe Internet is designed to help schools protect minors from harmful content on the internet. This protection is powered by Jamf's content filtering and network threat protection engine delivered via Jamf School or Jamf Pro. With Jamf Safe Internet, education institutions are able to deploy preset content filtering tabs or custom build their own restrictions. Jamf Safe Internet also provides network threat prevention, which secures the network from phishing, as well as malware or ransomware attacks.

ZecOps

ZecOps was acquired by Jamf in November 2022. ZecOps is an ADR solution for mobile devices that gives organizations the ability to extract critical device telemetry. This information is then analyzed to identify IOC, which can show

when a device has fallen victim to a highly targeted attack. By making it possible to identify compromised devices, organizations are able to quickly respond and remediate, preventing extended exposure. ZecOps features:

- leverage mobile IOCs for threat hunting and mobile threat intelligence;
- automatically construct a timeline of suspicious events that show when and how a device was compromised;
- include a collector that only gathers what's needed for a mobile cyber investigation, excluding customer personally-identifiable information; and
- include proactive threat hunting capabilities to search beneath the “application sandbox” to automatically analyze device logs and write YARA malware identification and classification rules.

Jamf Teacher, Student, Parent, and Assessment apps

Jamf's education apps empower teachers, parents, and students to quickly and easily control, manage, and secure devices inside and outside of the classroom. Students can setup their own device and stay focused with Jamf Student, instructors prepare lesson profiles and communicate with students with Jamf Teacher, and parents help keep homework sessions focused and without distraction with Jamf Parent, which is available on a range of devices, including Apple Watch and Android. Jamf Assessment app enables live proctoring of web-based assessment exams and displays camera view and the exam itself in a single app so that proctors can always keep students' screens and third-party video screens on view. With the ecosystem of Jamf education apps, education institutions keep teachers productive, parents collaborative, and students engaged while gaining insights necessary for IT and security teams.

Industry Workflows: Patient Experience, Virtual Visits, Clinical Communications, Jamf Setup and Jamf Reset

Jamf has a unique set of patented solutions that streamline user and IT experiences in healthcare and other vertical markets. Healthcare Listener is an electronic medical record integration to Jamf Pro that automates iPad and Apple TV deployments for patient experience. Virtual Visits is a video conferencing solution that facilitates easy, remote telehealth encounters for patients, families, and providers. Jamf Setup and Jamf Reset are iOS and iPadOS apps that simplify wireless device provisioning and refresh for clinical communications and other frontline work deployments. In all cases, these patented Jamf-based workflows empower people with devices for a purpose, improve user experience, and reduce the typical barriers for IT and IS teams.

Developer Workflows: Jamf API and Jamf Marketplace

Jamf's platform of solutions have a broad range of well-documented APIs to allow customers and partners alike to build unique custom workflows, create powerful automations, or even augment other connected solutions to enhance their value, all driven by API interactions with Jamf. Through these APIs, customers have created thousands of custom workflow solutions for their own environments, and partners have created and listed over 270 integrations in the Jamf Marketplace — which is a highly curated collection of Apple ecosystem solutions across management, identity, security, and workflow automation.

Our Technology

Our software platform was purpose-built to help organizations succeed with Apple, ensuring the highest standards for security and performance while preserving the Apple user experience. Our platform is built on the following core tenets:

Optimized for cloud

We build products that provide Apple-focused device management, identity and access management, and endpoint protection solutions optimized for cloud environments. Our products are built on the market-leading cloud platform (AWS), but are architected for flexibility to utilize other cloud platforms. This foundation has enabled us to scale and support millions of devices since our SaaS offering launched in 2012.

Global availability

Our products are designed to deploy worldwide, using regional AWS servers, to deliver the performance required by our customers. We are able to rapidly expand our global cloud footprint as demand for our products grows in new regions.

Scalable and reliable

Our products are designed to remove customers' worry about availability, scalability, and maintenance of the infrastructure that powers their solution. Our customers are responsible for their fleet of devices, while Jamf handles all back-end management and scaling operations at the software layer and on a global basis for infrastructure management. Jamf employees are located worldwide to ensure we are available whenever and wherever our customers need us.

We are able to quickly provision new capacity and scale operations through automation on top of our cloud software platform. We continually demonstrate the success of our offering by supporting numerous Fortune 500 customers and large-scale education customers even at their most demanding peak periods.

Our SaaS offerings are designed for reliability with a highly available infrastructure design spanning numerous data centers for all regions in which we have operations. Jamf is built to be "always on" to all of our cloud customers. If infrastructure becomes unavailable for any reason, our offering reroutes traffic to a secondary location to ensure we deliver on our Service Level Agreements. This availability is monitored externally from an outside provider, and Jamf employees are proactively notified if availability is ever impacted.

Jamf empowers customers to seamlessly upgrade to our latest software. Our software platform streamlines automated backups, upgrades, and enables roll-back if required for any reason. Our extensive experience running distributed systems at scale helps our customers remain focused on meeting their organizational needs.

Enterprise-grade security

Security is a critical customer requirement and a guiding principle at Jamf. Our customers frequently use our products to manage integral platforms, which informs our approach to security and compliance. We integrate security principles into development processes, test product code and infrastructure for potential security issues, and deploy security technologies. We have access controls to data in our production environments strictly assigned, monitored, and audited. To ensure our processes remain innovative and secure, we undergo continuous third-party testing for vulnerabilities within our software architecture. We also engage with a third-party audit firm to audit our security program against well-known security standards like SOC2 Type II and ISO 27001.

Differentiated technology

While there are many powerful capabilities of our technologies, the following are a few capabilities that set us apart from others in the market:

- ***Powerful architected-for-Apple agent.*** Jamf has been perfecting its Apple device agent for over 20 years. Using the Jamf agent, Apple IT administrators can access remote computers and file systems, collecting attributes and intelligence as if they were physically sitting with every Apple device in their fleet. The Jamf agent is written at the user-level and therefore does not require loading code into the operating system kernel, known as a kext. Most Windows-based cross-platform competitors employ kexts when they are ported to the Mac, which results in a slower, less secure, and less stable solution. Jamf's agent can quickly and safely consolidate and scale Apple inventory data beyond any cross-platform solution.
- ***Enterprise attributes and smart grouping.*** Not only does Jamf have more inventory information about devices than our competitors, but because of our extensible enterprise attributes, we can consolidate data based on device usage or user. Through our patented smart grouping technology, Jamf is then able to dynamically group devices, based on standard attributes, enterprise attributes, or a combination thereof to target and execute business workflows at scale. These workflows can be extremely advanced when tapping into the Jamf policies engine, which includes full scripting capabilities for maximum flexibility.
- ***Industry workflows.*** Part of filling the gap between what Apple provides and what the enterprise requires is providing technology that extends far beyond basic management to meet the unique needs of specific industries.

For example, Jamf's patented mobile-to-mobile management technology provides teachers the control of student iPads in the classroom they need. Jamf's patented healthcare listener functionality empowers hospitals to launch device workflows based on events in the electronic medical record. Jamf also has developed a patented telehealth workflow, Virtual Visits, aimed to protect providers while still connecting patients to care and their communities. And Jamf's patented setup and reset iOS applications create a shared device workflow that is required in these industries as well as retail, hospitality, field services, and more.

- **High performance native Apple APIs.** Jamf creatively utilizes extensive APIs from published Apple technologies. Using native Apple APIs also allows us to be ready instantly with each new Apple operating system as Apple preserves forward-moving compatibility of their native APIs. We have a pending patent application for this innovative solution.
- **Enterprise self-service.** Jamf's value is more than simply retaining the legendary Apple user experience as devices are deployed throughout the enterprise. We believe Jamf improves the Apple experience with a simple-to-use enterprise self-service solution. This application enables IT to empower end-users with a privately brandable application that allows users to install approved apps or perform complex tasks with a single mouse click from a personalized enterprise catalog. Jamf's self-service app empowers users to setup resources, update configurations, apply policies, and troubleshoot common issues with a single click. The self-service app taps into Jamf's underlying technologies, allowing end users to simply and quickly solve their own problems without submitting an IT help ticket.

Sales and Marketing

Sales

We have a global, multi-faceted go-to-market approach that allows us to efficiently sell to and serve the needs of organizations of varying sizes. By offering a range of products and routes to the market, including through a direct sales force, online, and indirectly via our channel partners (including Apple), we can serve many types of organizations across the world.

Our direct sales force services larger organizations and those with more complex requirements. The direct sales organization is divided into inside and outside sales teams, organized by customer size, and is further segmented with teams focused on acquiring new logos or growing spend in our existing customer base. Our direct sales force is supported by sales development representatives that provide qualified leads and other technical resources.

To complement our direct sales teams, we have a large network of over 500 channel partners globally that resell our products located across the world. These channel partners provide us with expanded market coverage and an efficient way to reach smaller or emerging geographies, providing us with additional sales capacity and the ability to be present in more global markets. Approximately 60% of our bookings were facilitated via our channel partners for the year ended December 31, 2022.

One of our notable channel partners is Apple, which, as a channel partner, facilitated approximately 1% of our bookings for the year ended December 31, 2022. Apple education became a Jamf channel partner in 2011 and resells Jamf to K-12 and higher education organizations within the U.S. In 2012, Apple expanded its channel relationship by offering Jamf products to businesses through Apple retail, which includes their stores in the U.S. and sales teams that are focused on SMBs. In 2014, we became a member of Apple's Mobility Partner Program that focuses on solution development and effective go-to-market activities. We work closely with these various Apple teams across both sales and marketing to develop close relationships and expand our customer base.

For smaller businesses or those with less complex requirements, we provide an online self-service e-commerce model that allows organizations to find products best suited for their needs. This provides an efficient way to introduce smaller organizations to Jamf, with an opportunity for the relationship to grow over time.

Our global, multi-faceted go-to-market approach, combined with the ability for customers to easily trial our products, has allowed us to build an efficient, high velocity sales model.

Marketing

A key ingredient to our sales effectiveness and efficiency is our marketing engine. Our global marketing team builds market awareness of Jamf, generates preference and demand for our products, and enables our sales teams and channel partners to efficiently develop business with new and existing customers.

We focus our marketing strategy on building recognition of the Jamf brand through thought leadership and differentiated messaging that emphasizes the business value of our products. Our efforts include content marketing, social media, search engine optimization, events, and public and industry analyst relations. We leverage this brand awareness to acquire new customers and cross-market our software solutions to our existing customer base through global campaigns that integrate digital, social, web, email, customer advocacy, and field marketing tactics, such as regional customer/prospect conferences. To create maximum impact, these campaigns are created and adapted to serve all geographic regions and routes to market. We then accelerate prospects or customers through the buying journey by enabling our sales team and channel partners with a range of product/solution content, internal tools, such as return on investment calculators, competitive intelligence, and case studies. Finally, we capitalize on the voices of our highly satisfied and loyal customers using a variety of customer advocacy tactics including case studies and videos, software reviews, social amplification, references, and referrals.

The Jamf brand further benefits from Jamf Nation, the world's largest online community of Apple administrators. Jamf Nation is our active community, including Jamf customers and potential customers, who share ideas and solutions related to their Apple deployments. Jamf Nation's large volume of user-generated content serves as a great source of organic search traffic, introducing prospective customers to the Jamf brand and Jamf products. Complementing Jamf Nation, we host JNUC, the world's largest enterprise Apple IT and security administrator conference. With thousands of attendees, publicly streamed keynotes and 150 customer and Jamf-led sessions, we further tap into the power of our passionate customer base and garner significant market attention as the leader in our space.

Customers

As of December 31, 2022, we had more than 71,000 customers, over 24,000 of which became customers in the last two years, in more than 100 countries and territories. As of December 31, 2022, our customers include 9 of the largest 10 Fortune 500 companies, 7 of the top 10 Fortune 500 technology companies, 22 of the 25 most valuable brands (according to the Forbes Most Valuable Brands rankings), the 15 largest U.S. banks (based on total assets according to bankrate.com), the top 10 global universities (according to U.S. News and World Report), 8 of the 10 largest U.S. school districts (according to Niche), and 17 of the 20 top U.S. hospitals (according to U.S. News and World Report). Our customer base is highly diversified, with no single end customer representing more than 1% of ARR. We believe we have a highly satisfied customer base, as evidenced by our Net Promoter Score that significantly exceeds industry averages.

Customer Success

We believe that the value generated by the adoption of our products is strengthened by our strong dedication to ensuring customer success and developing long-term relationships, as demonstrated by our Net Promoter Score that significantly exceeds industry averages.

Our services department helps educate, support, and engage our customers to ensure their success with our software. We provide expertise to our customer base both virtually and onsite. We offer implementation services to encourage faster adoption of our products, and onsite instructor-led training courses for customers that have adopted our products. As part of this training, customers can obtain intermediate to expert-level certifications. We also offer consultative services specific to customer needs with both in-house professional service engineers and a vast array of integration partners who deliver services worldwide.

Our technical support department consists of a multi-layered support model. The department is strategically located in various locations around the globe. We offer 24/7 premium support for customers who have more complex environments or require more comprehensive support. We maintain a robust and up-to-date knowledge base and online technical documentation resource base for our customers, along with an online training catalog with hundreds of video-based training modules aimed at helping them better understand and use our products. We strive to provide the best possible support for our customers and maintained a high customer satisfaction score of 9.26 out of 10 in 2022 based on our surveys.

We value customer engagement and have a dedicated team of customer success professionals who work within three tiers of engagement models to proactively drive adoption, foster communication, and ensure the success of our products. We

offer success planning exercises for our high-tier enterprise customers, and all customers benefit from our health scoring algorithm that uses multiple factors of product usage and company engagement to determine how we can best support their needs.

It is important to us that our customers have the resources they need to succeed with Apple, and customers are encouraged to connect and engage with the larger community of Apple administrators. This is best evidenced by Jamf Nation. Complementing our world-class technical support, this active, grassroots community serves as a highly qualified and efficient crowd-sourced Q&A engine for anyone with questions about Apple and Jamf deployments. Jamf Nation members come together to gain insight, share best practices, vet ideas with fellow administrators, and submit product feature requests. We intend to continue investing in these relationships and ensure that our Jamf Nation community remains a vibrant forum for discussion and problem-solving for our customers.

Research and Development

Our research and development department is focused on enhancing our existing products and developing new products to maintain and extend our leadership position. Our department is built around small teams who practice agile development methodologies that enable us to innovate quickly and at scale globally. The teams are organized to support our mission of helping organizations succeed with Apple and ensuring that we continue to deliver same-day support for Apple across our portfolio. To provide same-day support for Apple, we deliberately schedule our annual efforts around Apple's anticipated product release schedules and reserve engineering capacity accordingly. This nimble approach enables us to successfully support the Apple enterprise by staying current on Apple releases and delivering differentiated solutions, many of which form the core of our intellectual property portfolio. Approximately 25% of our global employee base is dedicated to research and development. Our research and development teams are organized into teams that are focused by product and based principally in Minneapolis, MN, Eau Claire, WI, Katowice, Poland, Brno, Czech Republic, and Tel Aviv, Israel.

Intellectual Property

We rely on a combination of patent, copyright, trademark, trade dress, and trade secret laws in the U.S. and other jurisdictions, as well as confidentiality procedures and contractual restrictions, to establish and protect our intellectual property and proprietary rights. These laws, procedures, and restrictions provide only limited protection. As of December 31, 2022, we owned eleven issued U.S. patents and eighteen issued patents in foreign jurisdictions. Excluding any patent term adjustments or patent term extensions, our issued U.S. patents will expire between 2034 and 2042. We cannot be assured that any of our patent applications will result in the issuance of a patent or whether the examination process will require us to narrow the scope of the claims sought. Our issued patents, and any future patents issued to us, may be challenged, invalidated, or circumvented, may not provide sufficiently broad protection, and may not prove to be enforceable in actions against alleged infringers.

We have also registered, and applied for the registration of, numerous U.S. and international trademarks and domain names, including "Jamf" and the "Jamf" logo.

We enter into agreements with our employees, contractors, customers, partners, and other parties with which we do business to limit access to and disclosure of our technology and other proprietary information. We cannot be certain that the steps we have taken will be sufficient or effective to prevent the unauthorized access, use, copying, or the reverse engineering of our technology and other proprietary information, including by third parties who may use our technology or other proprietary information to develop products and services that compete with ours. Moreover, others may independently develop technologies that are competitive with ours or that infringe on, misappropriate, or otherwise violate our intellectual property and proprietary rights, and policing the unauthorized use of our intellectual property and proprietary rights can be difficult. The enforcement of our intellectual property and proprietary rights also depends on any legal actions we may bring against any such parties being successful, but these actions are costly, time-consuming, and may not be successful, even when our rights have been infringed, misappropriated, or otherwise violated.

Furthermore, effective patent, copyright, trademark, trade dress, and trade secret protection may not be available in every country in which our products are available, as the laws of some countries do not protect intellectual property and proprietary rights to the same extent as the laws of the U.S. In addition, the legal standards relating to the validity, enforceability, and scope of protection of intellectual property and proprietary rights are uncertain and still evolving.

Companies in the software industry or non-practicing entities may own large numbers of patents, copyrights, trademarks, and other intellectual property and proprietary rights, and these companies and entities have, and may in the future,

request license agreements, threaten litigation, or file suit against us based on allegations of infringement, misappropriation, or other violations of their intellectual property and proprietary rights.

See “Risk Factors — Risks Related to Our Intellectual Property and IT Systems” for a more comprehensive description of risks related to our intellectual property.

Competition

We generally compete with large cross-platform enterprise providers and early stage providers of Apple enterprise solutions. Large enterprise providers, such as VMware, Microsoft, and IBM, typically compete with us on one solution (e.g. device management, identity, network security, or endpoint-security) intended for cross-platform use and not specialized for Apple. Given Jamf’s success, several companies are following our approach to delivering an Apple ecosystem vision. While the latter category of competitors is Apple-focused, they lack the depth of our platform, and none have grown to a meaningful scale to be considered material competitors.

Key competitive factors in our market include:

- user experience;
- breadth of product offerings;
- IT efficiency;
- total cost of ownership;
- reliability and performance of solutions;
- turnkey product capabilities;
- interoperability with other software solutions;
- speed, compatibility, and feature support of new operating systems;
- quality and availability of global service and support; and
- brand awareness, reputation, and influence among IT professionals.

We believe that we compete favorably on these factors.

For additional information, see “Risk Factors — Risks Associated with Our Business, Operations, and Industry — We are in a highly competitive market, and competitive pressures from existing and new companies, including as a result of consolidation in our market, may harm our business, revenues, growth rates, and market share.”

Human Capital Resources

Jamf is a culmination of passionate, committed, and bright people who shape our culture and live our core values of Selflessness and Relentless Self Improvement. We do not say we are the best, but we strive to be the best — for our customers, our employees, and our communities. Our leaders encourage autonomy, exploration, and innovation with spirit and enthusiasm. Through transparency, openness, and humility, we embrace the opportunity to challenge ourselves. We are a group of curious self-starters who thrive on taking initiative and are excited by global impact. We strive to provide an environment where our employees enjoy the freedom to be themselves and work how they work best. We believe that by engaging employees, keeping them motivated, and empowering them to make a difference, they find deeper connections to and meaning in their work, which helps us retain top talent and provide a better customer experience.

As of December 31, 2022, our voluntary retention rate for employees was 90%. Additionally, in our annual employee engagement survey conducted in October 2022, 87% of over 2,100 participating employees agreed that they would recommend Jamf as a great place to work. We also scored 82% in the overall engagement index, referring to the state in which employees feel enthusiasm and passion for their roles, which is often characterized by their motivation, effort, and pride. In 2022, Great

Place to Work[®], a global leader in workplace culture, and Fortune[®] magazine named Jamf as one of the year's 100 Best Companies to Work For[™] and one of the Best Workplaces in Technology[™]. This award is based on the responses of current employees and what their experiences have been. In 2021, Jamf also ranked as a Fortune Best Workplaces for Women[™], Fortune Best Workplaces in Technology[™], Fortune Best Workplaces for Millennials[™], and Best Workplaces for Parents[™].

We believe that we can only be our best selves when given the freedom to be ourselves. To that end, we believe it is important to create an inclusive environment in which all Jamf employees belong. Together, we propel Jamf to be a global leader of equality and fairness in the workplace. Jamf ERGs are recognized and supported inclusion communities led in partnership with our employees. Our ERGs, Families@Jamf, Women@Jamf, Accessibility@Jamf, The Shades of Jamf, PROUD@Jamf, and LatinX@Jamf, are organized on the basis of shared identities, experiences, and/or backgrounds and are open to all employees. Our employee's passion and drive in leading ERGs contribute to the creation of our inclusive environment, support employees through development and networking opportunities, and support business impact through employee led conversations, special projects and programs, as well as external campaigns in partnership with JNGF and Community Education Initiatives. All of our work is anchored on our Jamf values. As of December 31, 2022, based on employees who chose to identify their gender, approximately 33.6% of our workforce and 38.5% of new hires in 2022 self-identified as women. Women also made up approximately 36.0% of the Jamf management team as of December 31, 2022.

As of December 31, 2022, we had 2,796 employees, of which 1,736 were employed in the U.S. and 1,060 were employed outside of the U.S. In certain countries in which we operate we are subject to, and comply with, local labor law requirements, which automatically make our employees subject to industry-wide collective bargaining agreements. An insubstantial number of our employees are currently subject to collective bargaining agreements. We have not experienced any work stoppages.

In 2022, we released our first-ever Purpose and Impact Report, which provides additional information on our key ESG programs, goals, and commitments. Our Purpose and Impact Report is available on the Corporate Responsibility section of our website. Website references in this document are provided for convenience only, and the content on the referenced websites is not incorporated by reference into this report. While we believe that our ESG goals align with our long-term growth strategy and financial and operational priorities, they are aspirational and may change, and there can be no assurance that they will be met.

Government Regulation

We are subject to many U.S. federal and state and foreign laws and regulations that involve matters central to our business, including laws and regulations that involve data privacy and data protection, intellectual property, advertising, marketing, health and safety, competition, consumer protection, taxation, anti-bribery, anti-money laundering and corruption, economic or other trade prohibitions or sanctions, and securities law compliance. Our business may also be affected by the adoption of any new or existing laws or regulations or changes in laws or regulations that adversely affect our business. Many relevant laws and regulations are still evolving and may be interpreted, applied, created, or amended in a manner that could harm our business, and new laws and regulations may be enacted, including in connection with the restriction or prohibition of certain content or business activities.

We receive, process, store, use, and share data, some of which contains personal information. We are therefore subject to U.S. federal, state, local, and foreign laws and regulations regarding data privacy and the collection, storage, sharing, use, processing, disclosure, and protection of personal information and other data from users, employees, or business partners, including the GDPR, the UK – GDPR, the CPRA, and the CCPA, among others. These laws expand the rights of individuals to control how their personal data is processed, collected, used, and shared and create new regulatory and operational requirements for processing personal data, increase requirements for security and confidentiality, and provide for significant penalties for non-compliance. The implementation of the expanded data protection regulation like the GDPR has led other jurisdictions to either amend, or propose legislation to amend, their existing data privacy and cyber-security laws to resemble all or a portion of the requirements of such expanded regulation (e.g., for purposes of having an adequate level of data protection to facilitate data transfers from the EU) or enact new laws to do the same. Accordingly, the challenges we face regarding the GDPR, UK – GDPR, the CPRA, and CCPA will likely also apply to other jurisdictions that adopt regulatory frameworks of equivalent complexity. Accordingly, there are also a number of legislative proposals recently enacted or pending before the U.S. Congress, various state legislatures, and foreign governments concerning content regulation and data protection that could affect us. These and other laws and regulations that may be enacted, or new interpretation of existing laws and regulations, may require us to modify our data processing practices and policies and incur substantial costs to comply.

The foregoing description does not include an exhaustive list of the laws and regulations governing or impacting our business. See the discussion contained in Part I, Item 1A, “Risk Factors” of this Annual Report on Form 10-K for information regarding how actions by regulatory authorities or changes in legislation and regulation in the jurisdictions in which we operate may have a material adverse effect on our business.

Corporate Information

Jamf was founded in 2002. Our principal executive offices are located at 100 Washington Ave S, Suite 1100, Minneapolis, MN. Our telephone number is (612) 605-6625. Our website address is www.jamf.com. The information contained on, or that can be accessed through, our website is not incorporated by reference into this Annual Report on Form 10-K, and you should not consider any information contained on, or that can be accessed through, our website as part of this Annual Report on Form 10-K or in deciding whether to purchase our common stock. We are a holding company, and all of our business operations are conducted through our subsidiaries.

This Annual Report on Form 10-K includes our trademarks and service marks, such as “Jamf,” which are protected under applicable intellectual property laws and are our property. This Annual Report on Form 10-K also contains trademarks, service marks, trade names, and copyrights of other companies, such as “Amazon,” “Apple,” and “Microsoft,” which are the property of their respective owners. Solely for convenience, trademarks and trade names referred to in this Annual Report on Form 10-K may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names.

Available Information

We make available, free of charge through our investor relations website (ir.jamf.com), our annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K, and amendments to those reports, filed or furnished pursuant to Sections 13(a) and 15(d) of the Exchange Act, as soon as reasonably practicable after they have been electronically filed with, or furnished to, the SEC.

The SEC also maintains a website (www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Item 1A. Risk Factors

A description of the risks and uncertainties associated with our business is set forth below. You should carefully consider the risks described below, together with the financial and other information contained in this Annual Report on Form 10-K, before you decide to purchase shares of our common stock. If any of the following risks actually occur, or if any additional risks not presently known to us or that we have currently deemed immaterial occur, our business, financial condition, results of operations, cash flows, and prospects could be materially and adversely affected. In such an event, the trading price of our common stock could decline and you could lose all or part of your investment in our common stock.

Risk Factor Summary

The following summarizes certain of the principal factors that make an investment in our Company speculative or risky:

- the impact of adverse general and industry-specific economic and market conditions and reductions in IT spending;
- the potential impact of customer dissatisfaction with Apple or other negative events affecting Apple services and devices, and failure of enterprises to adopt Apple products;
- the potentially adverse impact of changes in features and functionality by Apple and other third parties on our engineering focus or product development efforts;
- changes in our continued relationship with Apple;
- the fact that we are not party to any exclusive agreements or arrangements with Apple;

- our reliance, in part, on channel partners for the sale and distribution of our products;
- our ability to successfully develop new products or materially enhance current products through our research and development efforts;
- our ability to continue to attract new customers and maintain and expand our relationships with our current customers;
- our ability to correctly estimate market opportunity and forecast market growth;
- our ability to effectively manage our future growth;
- our dependence on one of our products for a substantial portion of our revenue;
- our ability to change our pricing models, if necessary, to compete successfully;
- the impact of delays or outages of our cloud services from any disruptions, capacity limitations, or interferences of third-party data centers that host our cloud services, including AWS;
- our ability to meet service-level commitments under our subscription agreements;
- our ability to maintain, enhance, and protect our brand;
- our ability to maintain our corporate culture;
- the ability of Jamf Nation to thrive and grow as we expand our business;
- the potential impact of inaccurate, incomplete, or misleading content that is posted on Jamf Nation;
- our ability to offer high-quality support;
- risks and uncertainties associated with acquisitions, divestitures, and strategic investments;
- our ability to predict and respond to rapidly evolving technological trends and our customers' changing needs;
- our ability to compete with existing and new companies;
- our ability to attract and retain highly qualified personnel;
- risks associated with competitive challenges faced by our customers;
- the impact of our often long and unpredictable sales cycle;
- our ability to effectively expand and develop our sales and marketing capabilities;
- the risks associated with free trials and other inbound, lead-generation sales strategies;
- the risks associated with indemnity provisions in our contracts;
- risks associated with cybersecurity events;
- the impact of real or perceived errors, failures, or bugs in our products;
- the impact of general disruptions to data transmission;
- risks associated with stringent and changing privacy laws, regulations, and standards, and information security policies and contractual obligations related to data privacy and security;

- the risks associated with intellectual property infringement, misappropriation, or other claims;
- our reliance on third-party software and intellectual property licenses;
- our ability to obtain, protect, enforce, and maintain our intellectual property and proprietary rights;
- the risks associated with our use of open source software in our products; and
- risks related to our indebtedness, including our ability to raise the funds necessary to settle conversions of our convertible senior notes, repurchase our convertible senior notes upon a fundamental change, or repay our convertible senior notes in cash at their maturity.

These and other risks are more fully described below. If any of these risks actually occurs, our business, financial condition, results of operations, cash flows, and prospects could be materially and adversely affected. As a result, you could lose all or part of your investment in our common stock.

Risks Associated with Our Business, Operations, and Industry

Adverse general and industry-specific economic and market conditions and reductions in IT spending may reduce demand for our products, which could harm our results of operations.

Our revenue, results of operations, and cash flows depend on the overall demand for our products. We operate globally and as a result our business and revenues are impacted by global macroeconomic conditions. Global financial developments seemingly unrelated to us or the software industry may harm us. Currently, the U.S. and other key international economies are impacted by record levels of inflation, elevated interest rates, supply chain challenges, volatility in credit, equity, and foreign exchange markets, and overall uncertainty with respect to the economy, including the possibility of a recession. These factors could result in reductions in IT spending by our existing and prospective customers, customers delaying or canceling IT projects, choosing to focus on in-house development efforts, or seeking to lower their costs by requesting us to renegotiate existing contracts on less advantageous terms or defaulting on payments due on existing contracts or not renewing at the end of existing contract terms. In the last half of 2022, as result of the current macroeconomic uncertainty, some of our customers took a more moderate outlook when planning their future hiring and device growth needs.

Our customers may merge with other entities who use alternatives to our products and, during weak economic times, there is an increased risk that one or more of our customers will file for bankruptcy protection, either of which may harm our revenue, profitability, and results of operations. We also face risk from international customers that file for bankruptcy protection in foreign jurisdictions, particularly given that the application of foreign bankruptcy laws may be more difficult to predict. In addition, we may determine that the cost of pursuing any claim may outweigh the recovery potential of such claim. As a result, broadening or protracted extension of an economic downturn could harm our business, revenue, results of operations, and cash flows.

Because our products focus primarily on Apple, potential customer dissatisfaction with Apple, other negative events affecting Apple services and devices, or failure of enterprises to adopt Apple products could have a negative effect on our results of operations.

Our products are primarily focused on Apple devices. Because of this, our customers' satisfaction with our software and products is largely dependent in part upon their perceptions and satisfaction with Apple. Customer dissatisfaction with Apple could be attributed to us, impact our relationships with customers, and/or result in the loss of customers across all of our products if any of our customers chose to discontinue or reduce their use of Apple devices. For example, any incident broadly affecting the interaction of Apple devices with necessary Apple services (e.g., iCloud or Apple push notifications), including any delays or interruptions in such Apple services, could negatively affect our products and solutions. Similarly, any cyber-security events affecting Apple devices could result in a disruption to Apple services, regulatory investigations, reputational damage, and a loss of sales and customers for Apple. A prolonged disruption, cyber-security event, or any other negative event affecting Apple could lead to customer dissatisfaction and could in turn damage our reputation with current and potential customers, expose us to liability, and cause us to lose customers or otherwise harm our business, financial condition, and results of operations. In addition, since our products and solutions primarily focus on Apple devices, in the event of a prolonged disruption affecting Apple devices, we may not be able to provide our software to our customers. We may also incur significant costs for taking actions in preparation for, or in reaction to, events that damage Apple devices used by our customers. Additionally, federal regulatory agencies in the U.S. have been increasingly focused on large technology companies and their

competitive conduct. Such agencies could initiate proceedings or investigations involving Apple. If Apple were to change its business as a result of such proceedings or investigations, or is ordered to separate into various companies, such changes or separation could have a material effect on our ability to offer certain of our products, and there can be no assurance that, if Apple is separated into various companies that these companies would continue to be our partner.

Overall, Apple’s reputation and consumers’ views of Apple products could change if other technology companies release products that compete with Apple devices that customers view more favorably. For example, other technology companies could introduce new technology or devices that reduce demand for Apple devices. Our financial results could also be harmed if customers choose non-Apple products based on cost, availability, user experience, functionality, or other factors. The market for Apple products may not continue to grow, or may grow more slowly than we expect. As a result, enterprise adoption of Apple products may be slower than anticipated. Moreover, many enterprises use technology platforms other than Apple and have used other technologies for a long time. While this creates significant market opportunity for these enterprises to adopt Apple technology, we cannot be certain that enterprises will adopt Apple technology. There are many factors underlying an enterprise’s adoption of new technology, including cost, time, and knowledge required to implement such technology, data transfer, compatibility with existing technology, familiarity with and institutional loyalty to technology other than Apple, among other factors. If these enterprise users do not continue to adopt Apple technologies at recent historical rates and the rates that we anticipate, our revenue growth will be adversely affected, there will be adverse consequences to our results of operations, and will reduce the number of potential new Jamf customers. See also “— Certain estimates of market opportunity and forecasts of market growth included in this Annual Report on Form 10-K may prove to be inaccurate.” Any of these factors could have a material adverse effect on our business, results of operations, and financial condition.

Changes in features and functionality by Apple and other third-party systems could cause us to make short-term changes in engineering focus or product development or otherwise impair our product development efforts or strategy, increase our costs, and harm our business.

Our products depend on interoperability with Apple operating systems and cloud services, including interoperability at the moment of each new Apple release. Apple does not typically preview its technology with us or other partners and, as such, we do not receive advanced notice of changes in features and functionality of Apple technologies with which our products need to interoperate. In addition, unforeseen events (such as discovery of vulnerabilities and release of patches) may constrain our ability to respond in a timely manner. In any such events, we may be forced to divert resources from our preexisting product roadmap in order to accommodate these changes. As a result of having a short time to implement and test changes to our products to accommodate these new features, there is an increased risk of product defects. The frequency and complexity of new Apple features and updates may make it difficult for us to continue to support new releases in a timely manner. If we fail to enable IT departments to support Apple upgrades upon release, our business and reputation could suffer. This could disrupt our product roadmap and cause us to delay introduction of planned solutions, features, and functionality, which could harm our business. In addition, the functionality and popularity of our platform also depends on its interoperability with other third-party operating systems and devices, such as Microsoft and Google.

We rely on open standards for many integrations between our products and third-party applications that our customers utilize, and in other instances on such third parties making available the necessary tools for us to create interoperability with their applications. If application providers were to move away from open standards, or if a critical, widely-utilized application provider were to adopt proprietary integration standards and not make them available for the purposes of facilitating interoperability with our products, the utility of our products for our customers would be decreased. Furthermore, some of the features and functionality in our products require interoperability with operating system APIs. We also offer a robust catalog of APIs that our developer partners utilize to build integrations and solutions that are made available in our Jamf Marketplace to enhance features and functionality of our products. If operating system providers decide to restrict our access to their APIs, or if our developer partners cease to build integrations and solutions for our Jamf Marketplace, that functionality would be lost and our business could be impaired.

Changes in our continued relationship with Apple may have an impact on our success.

We have a broad relationship with Apple that covers all aspects of our business. We have always worked closely with Apple’s worldwide developer relations organization in an effort to support all new Apple innovations the moment the hardware or software is released. Apple and Jamf personnel frequently join forces to influence and collaborate as we work with customers. We also have several direct contractual relationships with Apple that span all enterprise devices across the Apple ecosystem, including Mac, iPad, iPhone, and Apple TV. Additionally, Apple is a significant reseller of Jamf products, particularly in education. These contractual relationships can be terminated by Apple at any time with limited advance notice to us. In addition, Apple launched ABE in the spring of 2022. While this platform is still in its early stages, ABE is currently

focused on SMBs with 500 or fewer employees. In the spring of 2022, we launched an enhanced tier of features in Jamf Now to support growing SMBs beyond device management to scale with the entire Apple ecosystem, and solve customer needs around deployment, user access, management, and security. We believe this enhanced tier of features in Jamf Now provides functionality that is different than ABE, however, certain of our customers and potential customers may purchase ABE instead of Jamf Now and other of our offerings. Accordingly, we believe ABE's feature set currently provides limited direct competition with our more complete Apple Enterprise Management solutions. In the future, however, Apple could leverage the ABE platform, whether through additional investment or the consolidation of other competitors of ours, to focus on larger enterprises and to compete more directly with the scale and breadth of product offerings we provide.

Our future relationship with Apple is important to our success. If we fail to maintain our current relationship and contracts with Apple, our ability to compete and grow our business may be materially impacted. For example, we may not be able to continue to support new Apple innovations and releases at the moment the hardware and software are released. While we do not rely on any private APIs or collaboration with Apple to provide our same-day support, reduced cooperation with Apple may make it more difficult for us to continue to support new releases in a timely manner and result in us devoting significant resources in order to meet our commitment to provide same-day support. If our relationship with Apple changes, it could become more difficult to integrate our products with Apple and could reduce or eliminate the sales we expect from Apple as a reseller. As a result, if we fail to maintain our current relationship with Apple, our business, financial condition, and results of operation could be adversely affected.

We are not party to any exclusive agreements or arrangements with Apple.

We are not party to any exclusive agreements or arrangements with Apple. Accordingly, while we believe our market opportunity expands as organizations increasingly adopt Apple technologies, the continued success and growth of our business is ultimately dependent upon our ability to compete effectively by reaching new customers, cross-selling to existing customers, and maintaining our position as the standard for Apple in the enterprise. As a result, even if organizations' adoption of Apple technologies continues to increase, if we are not able to compete successfully, our business, results of operations, and financial condition could be adversely affected. See “— If we fail to maintain, enhance, or protect our brand, our ability to expand our customer base will be impaired and our business, financial condition, and results of operations may suffer” and “— We are in a highly competitive market, and competitive pressures from existing and new companies, including as a result of consolidation in our market, may harm our business, revenues, growth rates, and market share.”

We rely, in part, on channel partners for the sale and distribution of our products and, in some instances, for the support of our products. A loss of certain channel partners, a decrease in revenues from certain of these channel partners, or any failure in our channel strategy could adversely affect our business.

We rely on channel partners for the sale and distribution of a substantial portion of our products. For the year ended December 31, 2022, approximately 60% of our bookings were through channel partners. We anticipate that we will continue to depend on relationships with third parties, such as our channel partners and system integrators, to sell, market, and deploy our products. Identifying partners, and negotiating and documenting relationships with them, requires significant time and resources. Our arrangements with our channel partners are generally non-exclusive, meaning they may offer customers the products of several different companies, including products that compete with us. Our competitors may be effective in providing incentives to channel partners and other third parties to favor their products or services over subscriptions to our products and a substantial number of our agreements with channel partners are non-exclusive such that those channel partners may offer customers the products of several different companies, including products that compete with ours. Our channel partners may cease marketing or reselling our products with limited or no notice and without penalty. If our channel partners do not effectively sell, market, or deploy our products, choose to promote our competitors' products, or otherwise fail to meet the needs of our customers, our ability to grow our business and sell our products may be adversely affected. In addition, acquisitions of such partners by our competitors could result in a decrease in the number of our current and potential customers, as these partners may no longer facilitate the adoption of our applications by potential customers. Further, some of our partners are or may become competitive with certain of our products and may elect to no longer integrate with our products. If we are unsuccessful in establishing or maintaining our channel partners and system integrators, our ability to compete in the marketplace or to grow our revenue could be impaired, and our results of operations may suffer.

In addition, our service provider partners often provide support to our customers and enter into similar agreements directly with our mutual customers to host our software and/or provide other value-added services. Our agreements and operating relationships with our service provider partners are complex and require a significant commitment of internal time and resources. In addition, our service provider partners are large corporations with multiple strategic businesses and relationships, and thus our business may not be significant to them in the overall context of their much larger enterprise. These

partnerships may require us to adhere to outside policies, which may be administratively challenging and could result in a decrease in our ability to complete sales. Even if the service provider partner considers us to be an important strategic relationship, internal processes at these large partners are sometimes difficult and time-consuming to navigate.

We invest significantly in research and development, and to the extent our research and development investments do not translate into new products or material enhancements to our current products, or if we do not use those investments efficiently, our business and results of operations would be harmed.

A key element of our strategy is to invest significantly in our research and development efforts to develop new products and enhance our existing products to address additional applications and markets. For the year ended December 31, 2022, our research and development expense was approximately 25% of our revenue. If we do not spend our research and development budget efficiently or effectively on compelling innovation and technologies, our business may be harmed and we may not realize the expected benefits of our strategy. Moreover, research and development projects can be technically challenging and expensive. The nature of these research and development cycles may cause us to experience delays between the time we incur expenses associated with research and development and the time we are able to offer compelling products and generate revenue, if any, from such investment. Additionally, anticipated customer demand for a product we are developing could decrease after the development cycle has commenced, rendering us unable to recover substantial costs associated with the development of such product. If we expend a significant amount of resources on research and development and our efforts do not lead to the successful introduction or improvement of products that are competitive in our current or future markets, it would harm our business and results of operations.

If we are unable to attract new customers, retain our current customers, or sell additional functionality and services to our existing customers, our revenue growth will be adversely affected.

To increase our revenue, we must continue to attract new customers and increase sales to existing customers. As our market matures, product and service offerings evolve, and competitors introduce lower cost or differentiated products or services that are perceived to compete with our products, our ability to sell our products could be adversely affected. Similarly, our sales could be adversely affected if customers or users within these organizations perceive that features incorporated into competitive products reduce the need for our products or if they prefer to purchase other products that are bundled with products offered by Apple or by other companies, including our partners, that operate in adjacent markets and compete with our products. As a result of these and other factors, we may be unable to attract new customers or increase sales to existing customers, which could have an adverse effect on our business, revenue, gross margins, and other operating results, and accordingly, on the trading price of our common stock.

We must also continually increase the depth and breadth of deployments of our products with our existing customers. While customers may initially purchase a relatively modest number of subscriptions or licenses, it is important to our revenue growth that they later expand the use of our platform by adding additional devices, users, or products. Our ability to retain our customers and increase the amount of subscriptions or support and maintenance contracts our customers purchase could be impaired for a variety of reasons, including customer reaction to changes in the pricing of our products, competing priorities in IT budgets, macroeconomic factors, or the other risks described herein. As a result, we may be unable to renew our subscriptions with existing customers or attract new business from existing customers, which would have an adverse effect on our business, revenue, gross margins, and other operating results, and accordingly, on the trading price of our common stock.

In addition, our ability to sell additional functionality to our existing customers may require more sophisticated and costly sales efforts, with respect to our large enterprise customers, government customers, customers in highly regulated industries, or sales of our security products. See “— Our sales efforts require considerable time and expense.”

In order for us to maintain or improve our results of operations, it is important that our customers maintain their subscriptions and renew their subscriptions with us on the same or more favorable terms. Our customers have no obligation to renew their subscriptions or support for our products after the expiration of the terms thereof. Our contracts are typically one year in duration, and in the ordinary course of business, some customers have elected not to renew. In addition, certain of our customers are able to terminate their contracts with us for any or no reason. Our customers may renew for shorter contract subscription lengths, reduce the device count of existing deployments, or cease using certain of our products. Our ability to accurately predict renewal or expansion rates is limited given the diversity of our customer base, in terms of size, industry, and geography. Our renewal and expansion rates may decline or fluctuate as a result of a number of factors, including customer spending levels, customer dissatisfaction with our products, decreases in the number of users at our customers, changes in the type and size of our customers, pricing changes, competitive conditions, the acquisition of our customers by other companies, and general economic conditions. If our customers do not renew their subscriptions or licenses for our products, or if they

reduce their subscription amounts at the time of renewal, our revenue and other results of operations will decline and our business will suffer. If our renewal or expansion rates fall significantly below the expectations of the public market, securities analysts, or investors, the trading price of our common stock would likely decline.

Certain estimates of market opportunity and forecasts of market growth included in this Annual Report on Form 10-K may prove to be inaccurate.

This Annual Report on Form 10-K includes our internal estimates of the addressable market for our products. Market opportunity estimates and growth forecasts, whether obtained from third-party sources or developed internally, are subject to significant uncertainty and are based on assumptions and estimates that may prove to be inaccurate. The estimates and forecasts in this Annual Report on Form 10-K relating to the size and expected growth of our target market, market demand and adoption, capacity to address this demand, and pricing may also prove to be inaccurate. In particular, our estimates regarding our current and projected market opportunity are difficult to predict. The addressable market we estimate may not materialize for many years, if ever, and even if the markets in which we compete meet the size estimates and growth forecasted in this Annual Report on Form 10-K, our business could fail to grow at similar rates, if at all.

Our recent growth rates may not be indicative of future growth, and if we do not effectively manage our future growth, our business, operating results, and financial conditions may be adversely affected.

We have experienced significant revenue growth in recent periods. In future periods, we may not be able to sustain revenue growth consistent with recent history, or at all. We have also experienced significant growth in our customer adoption and have expanded and intend to continue to expand our operations, including our domestic and international employee headcount. Our historical growth rate should not be considered indicative of our future performance and may decline in the future. In future periods, our revenue could grow more slowly than in recent periods or decline for any number of reasons, many of which are out of our control. We also expect our operating expenses to increase in future periods, particularly as we continue to invest in research and development and technology infrastructure, expand our operations globally, develop new products and enhancements for existing products, and as we support our operations as we grow and mature as a public company. If our revenue growth does not increase to offset these anticipated increases in our operating expenses, our business, financial position, and results of operations will be harmed, and we may not be able to achieve or maintain profitability. In addition, the additional expenses we will incur may not lead to sufficient additional revenue to maintain historical revenue growth rates and profitability.

The growth and expansion of our business places strain on our management, operational, and financial resources. To manage any future growth effectively, we must continue to improve and expand our IT and financial infrastructure, our operating and administrative systems and controls, and our ability to manage headcount, capital, and processes in an efficient manner. Any future growth will continue to add complexity to our organization and require effective coordination throughout our organization. There is no guarantee that we will be able to continue to develop and expand our infrastructure and business processes at the pace necessary to scale the business, and our failure to do so may have an adverse effect on our business. If we fail to efficiently expand our engineering, operations, customer support, professional services, cloud infrastructure, IT and financial organizations and systems, or if we fail to implement or maintain effective internal business processes, controls, and procedures, our costs and expenses may increase more than we planned or we may fail to execute on our product roadmap or our business plan, any of which would likely seriously harm our business, operating results, and financial condition.

We derive a substantial portion of our revenue from one product.

For the year ended December 31, 2022, sales of subscriptions to our Jamf Pro product accounted for approximately 64% of our total revenue. We expect these subscriptions to account for a large portion of our total revenue for the foreseeable future. As a result, our operating results could suffer due to:

- any decline in demand for Jamf Pro;
- the failure of our other products to achieve market acceptance;
- the introduction of products and technologies that serve as a replacement or substitute for, or represent an improvement over, Jamf Pro;
- the failure of Jamf Pro to interoperate or integrate with third party software and services;

- technological innovations or new standards that Jamf Pro does not address;
- sensitivity to current or future prices offered by us or our competitors; and
- our inability to release enhanced versions of Jamf Pro on a timely basis.

Our inability to renew or increase sales of subscriptions to our products or market and sell additional products and functionality, or a decline in prices of our platform subscription levels, would harm our business and operating results more seriously than if we derived more revenue from a greater variety of products. In addition, if the market for Jamf Pro grows slower than anticipated, or if demand for our other products does not grow as quickly as anticipated, whether as a result of competition, pricing sensitivities, product obsolescence, technological change, unfavorable economic conditions, uncertain geopolitical environment, budgetary constraints of our customers, or other factors, our business, results of operations, and financial condition would be adversely affected.

We may need to change our pricing models to compete successfully.

The intense competition we face in the sales of our products and services and general economic and business conditions can put pressure on us to change our prices. If our competitors offer deep discounts on certain products or services or develop products that the marketplace considers more valuable than ours, we may need to lower prices or offer other favorable terms in order to compete successfully. Any such changes may reduce margins and could adversely affect operating results. Our competitors may offer lower pricing on their support offerings, which could put pressure on us to further discount our offerings. In addition, some of our competitors offer free or significantly discounted product offerings to our customers in order to incentivize switching from our products to such competitor's products, or to otherwise enter the Apple ecosystem. This may require us to offer discounts or other incentives to keep such customers, and we may not be able to match free product offerings or significant discounts offered by these competitors. This may result in customers choosing such competitor's products instead of ours. In addition, our suppliers and partners may increase their pricing for a variety of reasons, such as recent inflationary pressures. There is no guarantee we would be able to offset such cost increases, if at all, which could reduce our expected margins. We also must determine the appropriate price of our offerings and services to enable us to compete effectively internationally. Our prices may also change because of discounts, a change in our mix of products toward subscription, enterprise-wide licensing arrangements, bundling of products, features and functionality by us or our competitors, anticipation of the introduction of new products, or promotional programs for customers or channel partners. In response to macroeconomic conditions, we may be required to offer deeply discounted pricing, adopt new pricing models, and offer extended payment terms in order to attract new and retain existing customers, which could have a material adverse impact on our liquidity and financial condition.

Any broad-based change to our prices and pricing policies could cause our revenue to decline or be delayed as our sales force implements and our customers adjust to new pricing policies. We or our competitors may bundle products for promotional purposes or as a long-term go-to-market or pricing strategy or provide guarantees of prices and product implementations. These practices could, over time, significantly constrain the prices that we can charge for certain of our products. If we do not adapt our pricing models to reflect changes in customer use of our products or changes in customer demand, our revenue could decrease.

Disruptions, capacity limitations, or interference with our use of the data centers operated by third-party providers that host our cloud services, including AWS, could result in delays or outages of our cloud service and harm our business.

We currently host our cloud service from third-party data center facilities operated by AWS from several global locations. Any damage to, failure of, or interference with our cloud service that is hosted by AWS, or by third-party providers we may utilize in the future, whether as a result of our actions, actions by the third-party data centers, actions by other third parties, or acts of God, could result in interruptions in our cloud service and/or the loss of our or our customers' data. While the third-party data centers host the server infrastructure, we manage the cloud services through our site reliability engineering team, and we need to support version control, changes in cloud software parameters, and the evolution of our products, all in a multi-OS environment. As we utilize third-party data centers, we may move or transfer our data and our customers' data from one region to another. Despite precautions taken during this process, any unsuccessful data transfers may impair the delivery of our service. Many of our customer agreements contain contractual service level commitments to maintain uptime of at least 99.9% for our cloud services, and if we, AWS, or any other third-party data center facilities that we may utilize fail to meet these service level commitments, we may have to issue credits to these customers, which could adversely affect our operations. Impairment of, or interruptions in, our cloud services may reduce our subscription revenues, subject us to claims and litigation, cause our customers to terminate their subscriptions, and adversely affect our subscription renewal rates and our ability to

attract new customers. Our business will also be harmed if our customers and potential customers believe our services are unreliable. Additionally, any limitation of the capacity of our third-party data centers could impede our ability to scale, onboard new customers, or expand the usage of existing customers, which could adversely affect our business, financial condition, and results of operations. In addition, our customers' satisfaction with our offerings is dependent in part upon their perceptions and satisfaction with our cloud infrastructure service providers. Dissatisfaction with such providers could damage our relationships with customers and/or result in the loss of customers across one or more of our products.

We do not control, or in some cases have limited control over, the operation of the data center facilities we use, and they are vulnerable to damage or interruption from earthquakes, floods, fires, power loss, telecommunications failures, and similar events. They may also be subject to cyberattacks, computer viruses, disabling devices, break-ins, sabotage, intentional criminal acts, acts of vandalism, and similar misconduct and to adverse events caused by operator error. Despite precautions taken at these facilities, the occurrence of a natural disaster, an act of terrorism, war, or other act of malfeasance, a decision to close the facilities without adequate notice, or other unanticipated problems at these facilities could result in lengthy interruptions in our service and the loss of customer data and business. We may also incur significant costs for using alternative equipment or facilities or taking other actions in preparation for, or in reaction to, any such events.

In the event that any of our agreements with our third-party service providers are terminated, there is a lapse or elimination of any services or features that we utilize or there is an interruption of connectivity or damage to facilities, whether due to actions outside of our control or otherwise, we could experience interruptions or delays in customer access to our platform and incur significant expense in developing, identifying, obtaining, and/or integrating replacement services, which may not be available on commercially reasonable terms or at all, and which would adversely affect our business, financial condition, and results of operations.

We provide service-level commitments under our subscription agreements. If we fail to meet contractual commitments for service level commitments or quality of professional services, we could be obligated to provide credits for future service or face subscription termination with refunds of prepaid amounts, which would lower our revenue and harm our business, results of operations, and financial condition.

Many of our subscription agreements contain service-level commitments. If we are unable to meet the stated service-level commitments, including failure to meet the uptime and delivery requirements under our customer subscription agreements, we may be contractually obligated to provide these customers with service credits, which could significantly affect our revenue in the periods in which the uptime or delivery failure occurs and the credits are applied. We could also face subscription terminations, which could significantly affect both our current and future revenue. In addition, if the quality of our professional services does not meet contractual requirements, we may be required to re-perform the services at our expense or refund amounts paid for the services. Any failure to meet these contractual commitments could also damage our reputation, which could also adversely affect our business and results of operations.

If we fail to maintain, enhance, or protect our brand, our ability to expand our customer base will be impaired and our business, financial condition, and results of operations may suffer.

We believe that maintaining, enhancing, and protecting the Jamf brand, including Jamf Nation, is important to support the marketing and sale of our existing and future products to new customers and expand sales of our products to existing customers. We also believe that the importance of brand recognition will increase as competition in our market increases. Successfully maintaining, enhancing, and protecting our brand will depend largely on our ability to: develop and deploy effective marketing efforts; provide reliable products that continue to meet the needs of our customers at competitive prices; maintain our customers' trust; continue to develop new functionality and use cases; successfully differentiate our products and product capabilities from competitive products; and obtain, maintain, protect, and enforce trademark and other intellectual property protection for our brand. Our brand promotion activities may not generate customer awareness or yield increased revenue, and even if they do, any increased revenue may not offset the expenses we incur in building our brand. In addition, independent industry analysts provide reviews of our platform, as well as products and services offered by our competitors, and perception of our platform in the marketplace may be significantly influenced by these reviews. If these reviews are negative, or less positive as compared to those of our competitors' products and services, our brand may be adversely affected. If we fail to successfully promote, maintain, or protect our brand, our business, financial condition, and results of operations may suffer.

If we cannot maintain our corporate culture as we grow, our business may be harmed.

We believe that our corporate culture has been a critical component to our success and that our culture creates an environment that drives and perpetuates our overall business strategy. We have invested substantial time and resources in

building our team and we expect to continue to hire aggressively as we expand both locally and internationally. As we grow and mature as a public company and grow internationally, we may find it difficult to attract and retain qualified diverse talent if we do not maintain a culture that is reflective of our talent. Over time, our hybrid work model may decrease the cohesiveness of our teams and our ability to maintain our culture, both of which are critical to our success. Any failure to preserve our culture could negatively affect our future success, including our ability to recruit and retain personnel and effectively focus on and pursue our business strategy.

If Jamf Nation does not continue to thrive as we grow and expand our business, or if content posted on Jamf Nation is inaccurate, incomplete, or misleading, our business could be adversely affected.

Jamf Nation provides a critical support function for our products and solutions. We allow users of Jamf Nation to post content directly. While we monitor such posts, we cannot control what users post. As a result, we can provide no assurance that users of Jamf Nation will continue to provide support by responding to questions with respect to our existing products and solutions, or any new products and solutions we may develop as we grow and expand our business. Moreover, as we further expand our business into new geographies, we can provide no assurance that Jamf Nation users will provide support for any issues specific to those jurisdictions or in relevant languages. In addition, because we cannot control what users post, users may post content that may be inaccurate, incomplete, or misleading, or that infringes, misappropriates, or otherwise violates third-party intellectual property or proprietary rights. It may take us time to correct any inaccuracies or remove such posts, and we can provide no assurance that we will successfully correct or remove all posts that are inaccurate or that allege to infringe, violate, or misappropriate third-party intellectual property or proprietary rights. As a result, customers relying on Jamf Nation for support for our products and solutions may suffer harm if the advice in a post is inaccurate, does not provide a thorough explanation, or is inconsistent with our best practices or intended use of our products, which could in turn damage our reputation and cause customers to lose faith in Jamf Nation. Any of these factors could adversely affect our reputation and/or confidence in Jamf Nation and could have a material adverse effect on our business, results of operations, and financial condition.

If we fail to offer high-quality support, our business and reputation could suffer.

Our customers rely on our customer support personnel to resolve issues and realize the full benefits that our products provide. High-quality support is also important for the renewal and expansion of our subscriptions with existing customers. The importance of our support function will increase as we expand our business and pursue new customers. Our sales process is dependent on our product and business reputation and on positive recommendations, referrals, and peer promotions from our existing customers. Many of our enterprise customers, particularly large enterprise customers, have complex networks and require high levels of focused support, including premium support offerings, to fully realize the benefits of our products. Any failure by us to maintain the expected level of support could reduce customer satisfaction and hurt our expansion and customer retention, particularly with respect to our large enterprise customers.

Furthermore, as we sell our products internationally, our support organization faces additional challenges, including those associated with delivering support, training, and documentation in languages other than English. Any failure to maintain high-quality customer support, or a market perception that we do not maintain high-quality support, could materially harm our reputation, business, financial condition, and results of operations, and adversely affect our ability to sell our products to existing and prospective customers. The importance of high-quality customer support will increase as we expand our business and pursue new customers.

Existing and future acquisitions, divestitures, strategic investments, or partnerships could be difficult to identify and integrate, divert the attention of key personnel, disrupt our business, dilute shareholder value, and adversely affect our business, operating results, and financial condition.

As part of our business strategy, we have in the past and expect to continue to make investments in and/or acquire complementary companies, services, products, technologies, or talent. Since 2019, we have completed eleven acquisitions, including our acquisition of ZecOps in November 2022. Our ability as an organization to acquire and integrate other companies, services, or technologies in a successful manner is not guaranteed.

In the future, we may not be able to find suitable acquisition or investment candidates, and we may not be able to complete such acquisitions or investments on favorable terms, if at all. If we do complete acquisitions or investments, we may not ultimately strengthen our competitive position or ability to achieve our business objectives, and any acquisitions or investments we announce or complete could be viewed negatively by our customers or investors. In addition, if we are unsuccessful at integrating existing and future acquisitions, or the technologies and personnel associated with such acquisitions,

into our company, the revenue and operating results of the combined company could be adversely affected. Any integration process may require significant time and resources, and we may not be able to manage the process successfully. We may not successfully evaluate or utilize the acquired technology or personnel, or accurately forecast the financial impact of an acquisition transaction, causing unanticipated write-offs or accounting charges. Additionally, integrations could take longer than expected, or if we move too quickly in trying to integrate an acquisition, strategic investment, partnership, or other alliance, we may fail to achieve the desired efficiencies.

We have, and may in the future have to incur debt or issue equity securities to pay for any such transaction, each of which could adversely affect our financial condition and the market price of our common stock. The sale of equity to finance such transactions or issuance of equity awards to new employees could result in dilution to our shareholders, which depending on the size of the target, may be significant. The incurrence of indebtedness would result in increased fixed obligations and could also include covenants or other restrictions that would impede our ability to manage our operations.

Additional risks we may face in connection with such transactions include, among others::

- disruptions to management focus on day-to-day responsibilities and ongoing operations;
- inherent uncertainties in valuation models;
- reductions in cash available for operations and other uses;
- challenges with implementing adequate and appropriate controls, procedures, and policies in acquired businesses;
- increased exposure to risks related to foreign operations due to the increase in our employee presence outside the U.S.;
- potential difficulties in completing projects associated with in-process research and development of acquired businesses;
- retention of key personnel from acquired companies;
- changes in relationships with strategic partners or the loss of any key customers or partners as a result of product acquisitions or strategic positioning resulting from any such transaction;
- liability for pre-acquisition activity, including intellectual property infringement claims, violations of laws, commercial disputes, tax liabilities, and other known and unknown liabilities;
- litigation or other claims resulting from any such transaction, including claims from terminated employees, customers, current and former stockholders, or other third parties;
- risks relating to the challenges and costs of closing a transaction, including completion of customary closing conditions for each transaction (such as obtaining applicable regulatory and stockholder approvals); and
- failure to achieve the expected benefits of any such transaction, including the need to later divest acquired assets at a loss if a transaction does not meet our expectations.

We may not be able to respond to rapid technological changes with new products and services offerings. If we fail to predict and respond rapidly to evolving technological trends and our customers' changing needs, we may not be able to remain competitive.

Our market is characterized by rapid technological change, changing customer needs, frequent new software product introductions, and evolving industry standards. The introduction of third-party products embodying new technologies and the emergence of new industry standards and Apple operating systems and products could make our existing and future software products obsolete and unmarketable. We may not be able to develop updated products and services that keep pace with these and other technological developments that address the increasingly sophisticated needs of our customers or that meet new industry standards or 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 and the development of new markets and applications for our technology and thereby fail to take advantage of new market opportunities or fall behind early movers in

those markets. Our customers require that our products effectively identify and respond to these challenges on a timely basis without disrupting the performance of our customers' IT systems or interrupting their operations. As a result, we must continually modify and improve our offerings in response to these changes on a timely basis. If we are unable to evolve our products in time to respond to and remain ahead of new technological developments, our ability to retain or increase market share and revenue in our markets could be materially adversely affected.

Our ability to expand sales of our products depends on several factors, including potential customer awareness of our products; the timely completion, introduction, and market acceptance of enhancements to our products or new products that we may introduce; our ability to attract, retain, and effectively train inside and field sales personnel in a hybrid work environment; our ability to develop or maintain integrations with partners; the effectiveness of our marketing programs; and the costs of our products and the success of our competitors. If we are unsuccessful in developing and marketing our products, or if organizations do not perceive or value the benefits of our products, the market for our products might not continue to develop or might develop more slowly than we expect, either of which would harm our growth prospects and operating results.

In addition, the process of developing new technology is complex and uncertain, and if we fail to accurately predict customers' changing needs and emerging technological trends, our business could be harmed. We believe that we must continue to dedicate significant resources to our research and development efforts, including significant resources to developing new products and product enhancements before knowing whether the market will accept them. Our new products and product enhancements could fail to attain sufficient market acceptance for many reasons, including:

- the failure to accurately predict market or customer demands;
- defects, errors, or failures in the design or performance of our new products or product enhancements;
- negative publicity about the performance or effectiveness of our products;
- the introduction or anticipated introduction of competing products by our competitors; and
- the perceived value of our products or enhancements relative to their cost.

Our competitors, particularly those with greater financial and operating resources, may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards, or customer requirements. With the introduction of new technologies, the evolution of our products and new market entrants, we expect competition to intensify in the future. For example, as we expand our focus into new use cases or other product offerings beyond our existing product portfolio, we expect competition to increase. Pricing pressures and increased competition generally could result in reduced sales, reduced margins, losses, or the failure of our products to achieve or maintain more widespread market acceptance.

We are in a highly competitive market, and competitive pressures from existing and new companies, including as a result of consolidation in our market, may harm our business, revenues, growth rates, and market share.

Our products seek to serve multiple markets, and we are subject to competition from a wide and varied field of competitors. Our established competitors may have greater name recognition, longer operating histories, and significantly greater resources, which allows them to respond more quickly and effectively to new or changing opportunities or challenges, technologies, operational requirements, and industry standards. Our competitors who are new or early stage entrants to the market may have more nimble operations due to having fewer products and less overhead and may be willing to take legal and operational risks, which allows them to launch products and meet customer demand more quickly and efficiently. Regardless of size, our current and potential competitors may develop, market, and sell new products with comparable functionality to our platform, which could cause us to lose customers, slow the rate of growth of new customers, and/or cause us to decrease our prices to remain competitive, which could harm our business. In addition, some of our competitors may be able to leverage their relationships with customers based on an installed base of products or to incorporate functionality into existing products to gain business in a manner that discourages customers from including us in competitive bidding processes, evaluating, and/or purchasing our products. They have done this in the past, and may in the future do this, by selling at zero or negative margins, through product bundling, or through enterprise license deals. Some potential customers, especially Global 2000 Companies, have already made investments in, or may make investments in, substantial personnel and financial resources and established deep relationships with these much larger enterprise IT vendors, which may make them reluctant to evaluate our products or work with us regardless of product performance or features. Potential customers may prefer to purchase a broad suite of products from a single provider, or may prefer to purchase products from an existing supplier rather than a new supplier,

regardless of performance or features. In addition, some of our current or potential customers may elect to develop their own internal applications for their Apple deployment needs.

With the recent increase in merger and acquisition transactions in the technology industry, particularly transactions involving cloud-based technologies, we may face increased competitive pressures in the future as a result of industry consolidation. Strategic or financial buyers, including our existing competitors, could acquire one or more of our competitors and provide alternative products that compete more effectively against us. In addition, Apple could choose to develop competing technology, leverage its existing offerings, and/or acquire one or more of our competitors and standardize those competing offerings for a particular Apple product line or use case, which could reduce or eliminate the utility of our products for that product line or use case. See “— Changes in our continued relationship with Apple may have an impact on our success” for more information. As a result of any such industry consolidation, including by Apple, our competitive position and our ability to retain or increase market share and revenue in our markets could be materially adversely affected.

For all of these reasons and others we cannot anticipate today, we may not be able to compete successfully against our current and future competitors, which could harm our business, results of operations, and financial condition.

The loss of one or more of our key personnel, or our failure to attract and retain other highly qualified personnel in the future, could seriously harm our business.

We depend on the continued services of key personnel, including our executive officers. We generally do not have fixed-term employment agreements with our employees, and, therefore, they could terminate their employment with us at any time without penalty. While we do enter into non-compete agreements where permissible, they could pursue employment opportunities with other parties, including, potentially any of our competitors and there are no assurances that our non-compete agreements with any such key personnel would be enforceable. Additionally, our non-compete periods expire, at which time key personnel could work for any of our competitors. On January 5, 2023, the U.S. Federal Trade Commission issued a notice of proposed rulemaking that would prohibit employers from using non-compete agreements. If enacted, the FTC’s proposed rule would prohibit employers from implementing non-compete agreements. In such event, we would be unable to prevent our current employees and other personnel formerly employed by us from competing with us, potentially resulting in the loss of some of our business. In addition, we do not maintain any key-person life insurance policies. The loss of key personnel, including members of management and key engineering, product development, marketing, and sales personnel, could disrupt our operations, adversely impact employee retention and morale, and seriously harm our business.

Competition for highly qualified personnel is intense, especially for experienced design and software development engineers and sales professionals. In recent years, recruiting, hiring, and retaining employees with expertise in our industry and in the geographies where we operate has become increasingly difficult as the demand for software professionals, particularly in certain geographic areas where we operate, has increased as a result of the numerous technology, software, and other companies requiring these talents, particularly in tight labor markets. We have, from time to time, experienced, and we expect to continue to experience, difficulty in hiring and retaining employees with appropriate qualifications. Many of the companies with which we compete for experienced personnel have greater resources than we have. In addition, the recent move by companies, including us, to offer a remote or hybrid work environment has resulted in increased competition for qualified personnel and wage inflation in certain markets. If we hire employees from competitors or other companies, their former employers may attempt to assert that these employees or we have breached certain legal obligations, resulting in a diversion of our time and resources. If we fail to attract new personnel or fail to retain and motivate our current personnel, our business and future growth prospects could be harmed.

In addition, job candidates and existing employees often consider the value of the equity awards they receive in connection with their employment. Volatility or lack of performance in our stock price may also affect our ability to attract and retain our key employees. Also, some of our employees have become, or will soon become, vested in a substantial amount of equity awards, which may give them a substantial amount of personal wealth. This may make it more difficult for us to retain and motivate these employees, and this wealth could affect their decision about whether or not they continue to work for us. Any failure to successfully attract, integrate, or retain qualified personnel to fulfill our current or future needs could adversely affect our business, results of operations, and financial condition.

Our customers face numerous competitive challenges, which may materially adversely affect their business and ours.

Our customers include enterprises in a broad range of industries, including financial services, government, healthcare, legal, manufacturing, professional services, retail, technology, and telecommunications. Factors adversely affecting our customers may also adversely affect us. These factors include:

- recessionary periods in our customers' markets, including the impact of inflationary conditions on their budgets and financial condition;
- the inability of our customers to adapt to rapidly changing technology and evolving industry standards, which may contribute to short product life cycles or shifts in our customers' strategies;
- regulation changes in our customers' respective industries;
- the inability of our customers to develop, market, or gain commercial acceptance of their products, some of which are new and untested;
- the potential that our customers' products become commoditized or obsolete;
- loss of business or a reduction in pricing power experienced by our customers;
- the emergence of new business models or more popular products and shifting patterns of demand; and
- a highly-competitive consumer products industry, which is often subject to shorter product lifecycles, shifting end-user preferences, and higher revenue volatility.

If our customers are unsuccessful in addressing these competitive challenges, their businesses may be materially adversely affected, reducing the demand for our services, or decreasing our revenues, each of which could adversely affect our ability to cover fixed costs and our gross profit margins and results of operations.

Our sales efforts require considerable time and expense.

The timing of our sales can be difficult to predict. We and our channel partners are often required to spend significant time and resources to better educate and familiarize potential customers with the value proposition of our products. We spend substantial time and resources on our sales efforts without any assurance that our efforts will produce a sale. Customers often view the purchase of our products as a strategic decision and significant investment. As a result, our customers frequently require considerable time to evaluate, test, and qualify our products prior to purchasing them, and we often need to target the senior personnel that typically make these purchasing decisions, such as CIOs and CISOs and line-of-business leaders. In particular, large enterprises, government entities, customers that are purchasing our security products, and customers in highly regulated industries often undertake an extensive evaluation process that further lengthens our sales cycle. During the sales cycle, we expend significant time and money on sales and marketing and contract negotiation activities, which may not result in a sale. Additional factors that may influence the length and variability of our sales cycle include:

- the discretionary nature of purchasing and budget cycles and decisions;
- impacts on customers' business, cash flows, and financial condition as a result of macroeconomic conditions;
- lengthy purchasing approval processes;
- the mix of products considered by our customers;
- the industries in which our customers operate;
- the evaluation of competing products during the purchasing process;
- time, complexity, and expense involved in replacing existing products;
- announcements or planned introductions of new products, features, or functionality by our competitors or of new products or offerings by us; and
- evolving functionality demands.

If our efforts in pursuing sales and customers are unsuccessful, or if our sales cycles lengthen, our revenue could be lower than expected, which would adversely affect our business, results of operations, or financial condition.

If we do not effectively develop and expand our sales and marketing capabilities, we may be unable to add new customers or increase sales to our existing customers, and our business could be adversely affected.

We depend on our sales and marketing capabilities to obtain new customers and increase sales with existing customers. Our ability to achieve significant revenue growth will depend, in large part, on our success in recruiting, training, and retaining sufficient numbers of sales and marketing personnel, particularly in international markets. There is competition for sales and marketing personnel with the skills and technical knowledge that we require. New hires require training and may take significant time before they achieve full productivity. Our recent hires and planned hires may not become productive as quickly as we expect, and we may be unable to hire or retain sufficient numbers of qualified individuals in the markets where we do business or plan to do business. Furthermore, hiring sales and marketing personnel in new countries, or expanding our existing presence, requires upfront and ongoing expenditures that we may not recover if the sales personnel fail to achieve full productivity. We cannot predict whether, or to what extent, our sales will increase as we expand our sales and marketing capabilities or how long it will take for new hires to become productive. If we are unable to hire and train a sufficient number of effective sales and marketing personnel, or the sales and marketing personnel we hire are not successful in obtaining new customers or increasing sales to our existing customer base, our business and results of operations could be adversely affected.

We rely upon free trials of our products and other inbound lead-generation strategies to drive our sales and revenue. If these strategies fail to continue to generate sales opportunities or trial users do not convert into paying customers, our business and results of operations would be harmed.

We rely, in part, upon our marketing strategy of offering free trials of our products and other inbound, lead-generation strategies to generate sales opportunities. Many of our customers start with the free trial version of our products. These strategies may not be successful in continuing to generate sufficient sales opportunities necessary to increase our revenue. Many early users never convert from the trial version of a product to a paid version of such product. Further, we often depend on individuals within an organization who initiate the trial versions of our products being able to convince decision makers within their organization to convert to a paid version. Many of these organizations have complex and multi-layered purchasing requirements. To the extent that these users do not become, or are unable to convince others to become, paying customers, we will not realize the intended benefits of this marketing strategy, and our ability to grow our revenue will be adversely affected.

We have indemnity provisions under our contracts with our customers, channel partners, and other third parties, which could have a material adverse effect on our business.

In our agreements with customers, channel partners, and other third parties, we typically agree to indemnify them for losses related to claims by third parties of intellectual property infringement, misappropriation, or other violation. Additionally, from time to time, customers require us to indemnify them for breach of confidentiality or violation of applicable law, among other things. Although we normally seek to contractually limit our liability with respect to such obligations, some of these agreements provide for uncapped liability and the existence of any dispute may have adverse effects on our customer relationships and reputation, and we may incur substantial liability related to them. In addition, provisions regarding limitation of liability in our agreements with customers, channel partners, or other third parties may not be enforceable in some circumstances or jurisdictions or may not protect us from claims and related liabilities and costs. We maintain insurance to protect against certain types of claims associated with the use of our products, but our insurance may not adequately cover any such claims and may not continue to be available to us on acceptable terms or at all. If any such indemnification obligations are triggered, we could face substantial liabilities or be forced to make changes to our products, enter into license agreements, which may not be available on commercially reasonable terms or at all, or terminate our agreements with customers, channel partners, and other third parties and provide refunds. In addition, even claims that ultimately are unsuccessful could result in expenditures of management's time and other resources. Furthermore, any legal claims from customers and channel partners could result in reputational harm and the delay or loss of market acceptance of our products.

Risks Related to Our Intellectual Property and IT Systems

If we or our third-party service providers suffer a cyber-security event, our reputation may be harmed, we may lose customers, and we may incur significant liabilities, any of which would harm our business and operating results.

Cyberattacks, computer malware, viruses, social engineering (including phishing and ransomware attacks), and general hacking are becoming more prevalent and more sophisticated in our industry, and we may in the future become the target of third parties seeking unauthorized access to our confidential or sensitive information or that of our customers. While we have security measures in place designed to protect our and our customers' confidential and sensitive information and prevent data loss, these measures cannot provide absolute security and may not be effective to prevent a security breach, including as a result of employee error, theft, misuse, or malfeasance, third-party actions, unintentional events, or deliberate attacks by cyber criminals, any of which may result in someone obtaining unauthorized access to our customers' data, our data, our intellectual

property, and/or our other confidential or sensitive business information. In addition, third parties may attempt to fraudulently induce employees, contractors, or users to disclose information, including user names and passwords, to gain access to our customers' data, our data, or other confidential or sensitive information, and we may be the target of email scams that attempt to acquire personal information or company assets. Because techniques used to sabotage or obtain unauthorized access to systems change frequently, have increased in sophistication, and generally are not recognized until successfully launched against a target, we may be unable to anticipate these techniques, react in a timely manner, or implement adequate preventative measures. Furthermore, our solutions may not help detect situations in which a valid user identity has been compromised, for example as part of a sophisticated cyberattack. We devote significant financial and personnel resources to implement and maintain security measures; however, these resources may not be sufficient, and as cyber-security threats develop, evolve, and grow more complex over time, it may be necessary to make significant further investments to protect our data and infrastructure.

We rely on certain third party software vendors to operate our business, including identity and access management, payment processing, and hosting services; however, our ability to monitor our third-party service providers' data security is limited. Because we do not control our third-party service providers, or the processing of data by our third-party service providers, we cannot ensure the integrity or security of measures they take to protect and prevent unauthorized, accidental, or unlawful access or loss of our data or our customers' data.

A security breach suffered by us or our third-party service providers, an attack against our service availability, any unauthorized, accidental, or unlawful access or loss of data, or the perception that any such event has occurred, could result in a disruption to our service, litigation, an obligation to notify regulators and affected individuals, the triggering of service availability, indemnification and other contractual obligations, regulatory investigations, government fines and penalties, reputational damage, loss of investor confidence, loss of sales and customers, mitigation and remediation expenses, and other significant costs and liabilities. In addition, we may incur significant costs and operational consequences of investigating, remediating, eliminating, and putting in place additional tools and devices designed to prevent future actual or perceived security incidents, as well as the costs to comply with any notification or other obligations resulting from any security incidents. We also cannot be certain that our existing insurance coverage will cover any indemnification claims against us relating to any security incident or breach, will be available in sufficient amounts to cover the potentially significant losses that may result from a security incident or breach, will continue to be available on acceptable terms or at all, or that the insurer will not deny coverage as to any future claim. The successful assertion of one or more large claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could adversely affect our reputation, business, financial condition, and results of operations. Further, if a high profile security breach occurs with respect to any Apple operating systems, our customers and potential customers may lose trust in our products generally in addition to any Apple operating system products, such as ours in particular.

We cannot assure you that our products or hosted services will not be subject to cyberattacks, or other security incidents, especially in light of the rapidly changing security threat landscape that our products and hosted services seek to address. Due to a variety of both internal and external factors, including, without limitation, defects or misconfigurations of our products, our products could become vulnerable to security incidents (both from intentional attacks and accidental causes). In addition, because the techniques used by computer hackers to access or sabotage networks and endpoints change frequently, are increasing in sophistication, and generally are not recognized until launched against a target, there is a risk that advanced attacks could emerge that attack our software that we are unable to detect or prevent until after some of our customers are affected.

If our security products fail to detect a security incident, there could potentially be claims against us for such security incident, which could require us to pay damages and could hurt our reputation, whether or not the security incident was the fault of our products.

Further, our customers and their service providers administer access to data and control the entry of such data. We offer tools and support for what we believe are best practices to maintain security utilizing our services, but customers are not required to utilize those tools or follow our suggested practices, and the obligation to install and update security protection for our products lies with our customers. As a result, a customer may suffer a cyber-security event on its own systems, unrelated to our own, and a malicious actor could obtain access to the customer's information held on our system. Even if such a breach is unrelated to our own security programs or practices, or if the customer failed to adequately protect our products, that breach could result in our incurring significant economic and operational costs in investigating, remediating, eliminating, and putting in place additional tools and devices to further protect our customers from their own vulnerabilities, and could also result in reputational harm to us.

As a result, the reliability and capacity of our IT systems is critical to our operations and the implementation of our growth initiatives. Any cyber-security event or other material disruption in our IT systems, or delays or difficulties in implementing or integrating new systems or enhancing current systems, could have an adverse effect on our business and results of operations.

Real or perceived errors, failures, or bugs in our products could adversely affect our business, results of operations, financial condition, and growth prospects.

Our products are complex, and therefore, undetected errors, failures, bugs, or defects may be present in our products or occur in the future in our products, our technology or software or, technology or software we license in from third parties, including open source software, especially when updates or new products are released. Such software and technology is used in IT environments with different operating systems, system management software, devices, databases, servers, storage, middleware, custom and third-party applications, and equipment and networking configurations, which may cause errors, failures, bugs, or defects in the IT environment into which such software and technology is deployed. This diversity increases the likelihood of errors, failures, bugs, or defects in those IT environments. Some of our product features are powered by machine learning and artificial intelligence, which depend on datasets and algorithms that could be flawed, including through inaccurate, insufficient, outdated, or biased data. Despite testing by us, real or perceived errors, failures, bugs, or defects may not be found until our customers use our products. Real or perceived errors, failures, bugs, or defects in our products could result in negative publicity, loss of or delay in market acceptance of our products and harm to our brand, loss of investor confidence, weakening of our competitive position, claims by customers for losses sustained by them, or failure to meet the stated service level commitments in our customer agreements. In such an event, we may be required, or may choose, for customer relations or other reasons, to expend significant additional resources in order to help correct the problem. Any real or perceived errors, failures, bugs, or defects in our products could also impair our ability to attract new customers, retain existing customers, or expand their use of our products, which would adversely affect our business, results of operations, and financial condition.

We may also be subject to liability claims for damages related to real or perceived errors, failures, bugs, or defects in our products. A material liability claim or other occurrence that harms our reputation or decreases market acceptance of our products may harm our business and results of operations. Finally, since some our customers use our products for compliance reasons, any errors, failures, bugs, defects, disruptions in service, or other performance problems with our products may damage our customers' business and could hurt our reputation.

If there are interruptions or performance problems associated with our technology or infrastructure, our existing customers may experience service outages, and our new customers may experience delays in the deployment of our products.

Our continued growth depends on the ability of our existing and potential customers to access our products and applications 24 hours a day, seven days a week, without interruption or degradation of performance. We may in the future experience disruptions, outages, and other performance problems with our infrastructure due to a variety of factors, including infrastructure changes, introductions of new functionality, service interruptions from our hosting or technology partners, human or software errors, capacity constraints, distributed denial of service attacks, or other security-related incidents. In some instances, we may not be able to identify the cause or causes of these performance problems immediately or in short order. We may not be able to maintain the level of service uptime and performance required by our customers or our contractual commitments, especially during peak usage times and as our products become more complex and our user traffic increases. If any of our products malfunction or if our customers are unable to access our products or deploy them within a reasonable amount of time, or at all, our business would be harmed. The adverse effects of any service interruptions on our reputation and financial condition may be disproportionately heightened due to the nature of our business and the fact that our customers expect continuous and uninterrupted access to our products and have a low tolerance for interruptions of any duration. Since our customers may rely on our products to secure their Apple products and systems, and because customers use our products to assist in necessary business and service interactions and to support customer and client-facing applications, any outage on our products would impair the ability of our customers to operate their businesses and provide necessary services, which would negatively impact our brand, reputation, and customer satisfaction.

If Apple experiences service outages, such failure could interrupt our customers' access to our services, which could adversely affect their perception of our products' reliability and our revenue. Additionally, customers may attribute Apple service outages to our products, which may harm our reputation and cause our customers to ask us for assistance with these outages that are outside of our control. Any disruptions in these services, including as a result of actions outside of our control, would significantly impact the continued performance of our products. In the future, these services may not be available to us on commercially reasonable terms, or at all. If we do not accurately predict our infrastructure capacity requirements, our

customers could experience service shortfalls. We may also be unable to effectively address capacity constraints, upgrade our systems as needed, and continually develop our technology and network architecture to accommodate actual and anticipated changes in technology.

Any of the above circumstances or events may harm our reputation, cause customers to terminate their agreements with us, impair our ability to obtain subscription renewals from existing customers, impair our ability to grow our customer base, result in the expenditure of significant financial, technical, and engineering resources, subject us to financial penalties and liabilities under our service level agreements, and otherwise could adversely affect our business, results of operations, and financial condition.

We are subject to stringent and changing privacy laws, regulations, and standards, information security policies, and contractual obligations related to data privacy and security. Our actual or perceived failure to comply with such obligations could harm our business.

As a global company, Jamf is subject to global data protection, privacy, and security laws, regulations, and codes of conduct that apply to our various business units and data processing activities. Laws such as the GDPR in Europe, and new and emerging state laws in the U.S. on privacy, data, and related technologies, such as the CCPA and CPRA, as well as industry self-regulatory codes, create new compliance obligations and expand the scope of potential liability, either jointly or severally with our customers, partners, and suppliers. While we have invested in readiness to comply with applicable requirements, the dynamic and evolving nature of these laws, regulations, and codes, as well as their interpretation by regulators and courts, may affect our ability (and our customers' ability) to reach current and prospective customers, to respond to customer requests under the laws (such as individual rights of access, correction, and deletion of their personal information), and to implement our business models effectively. These requirements, among others, may impact demand for our platform and force us to bear the burden of more onerous obligations in our contracts.

Transferring personal information across international borders is complex and subject to legal and regulatory requirements as well as active litigation and enforcement in a number of jurisdictions around the world, each of which could have an adverse impact on our ability to process and transfer personal data as part of our business operations. For example, European data transfers outside the European Economic Area are highly regulated and litigated. The mechanisms that we and many other companies rely upon for European data transfers (e.g., Standard Contractual Clauses) are the subject of regulatory interpretation and judicial decisions by the Court of Justice of the EU. We are closely monitoring for developments related to valid transfer mechanisms available for transferring personal data outside the European Economic Area (including the Trans-Atlantic Data Privacy Framework) and other countries that have similar trans-border data flow requirements and adjusting our practices accordingly. The open judicial questions and regulatory interpretations related to the validity of transfers using Standard Contractual Clauses have resulted in some changes in the obligations required to provide our services in the EU and could expose us to potential sanctions and fines for non-compliance. In addition, certain jurisdictions have imposed data localization laws that may, for example, require personal information of citizens to be collected, stored, and modified only within that country.

We publicly post documentation regarding our practices concerning the collection, processing, use, and disclosure of data. Although we endeavor to comply with our published policies and documentation, we may at times fail to do so or be alleged to have failed to do so. The publication of our privacy policy and other documentation that provide promises and assurances about privacy and security can subject us to potential state and federal action if they are found to be deceptive, unfair, or misrepresentative of our actual practices.

Because the interpretation and application of many privacy and data protection laws along with contractually imposed industry standards are uncertain, it is possible that these laws may be interpreted and applied in a manner that is inconsistent with laws in other jurisdictions, our existing data management practices, or the features of our products and product capabilities. We therefore cannot yet fully determine the impact these or future laws, rules, regulations, and industry standards may have on our business or operations. Any failure or perceived failure by us, or any third parties with which we do business, to comply with our posted privacy policies, changing consumer expectations, evolving laws, rules and regulations, industry standards, or contractual obligations to which we or such third parties are or may become subject, may result in actions or other claims against us by governmental entities or private actors, the expenditure of substantial costs, time, and other resources or the imposition of significant fines, penalties, or other liabilities. In addition, any such action, particularly to the extent we were found to be guilty of violations or otherwise liable for damages, would damage our reputation and adversely affect our business, financial condition, and results of operations. Complying with these requirements and changing our policies and practices may be onerous and costly, and we may not be able to respond quickly or effectively to regulatory, legislative, and other developments. These changes may in turn impair our ability to offer our existing or planned features, products, and services

and/or increase our cost of doing business. As we expand our customer base, these requirements may vary from customer to customer, further increasing the cost of compliance and doing business.

We may be sued by third parties for alleged infringement, misappropriation, or other violation of their intellectual property and proprietary rights.

There is considerable patent and other intellectual property development activity in our industry. Our success depends, in part, on our ability to develop and commercialize our products without infringing, misappropriating, or otherwise violating the intellectual property or proprietary rights of others. From time to time, our competitors or other third parties have claimed, and in the future could claim, that we are infringing, misappropriating, or otherwise violating their intellectual property or proprietary rights, we have been, and in the future may become, subject to intellectual property disputes, and we may be found to be infringing, misappropriating, or otherwise violating such rights. A claim may also be made relating to technology that we acquire or license from third parties.

We may be unaware of the intellectual property or proprietary rights of others that may cover some or all of our products. Regardless of merit, any claims or litigation could cause us to incur significant expenses and, if successfully asserted against us, could require that we pay substantial damages, costs, and/or ongoing royalty payments, prevent us from offering our products, require us to obtain a license, which may not be available on commercially reasonable terms or at all, require us to re-design our products, which could be costly, time-consuming, or impossible, or require that we comply with other unfavorable terms. If any of our customers are sued, we would in general be required to defend and/or settle the litigation on their behalf. In addition, if we are unable to obtain licenses or modify our products to make them non-infringing, we might have to refund a portion of license fees prepaid to us and terminate those agreements, which could further exhaust our resources. In addition, we have paid, and may in the future pay, substantial settlement amounts or royalties on future product sales to resolve claims or litigation, whether or not legitimately or successfully asserted against us. Even if we were to prevail in the actual or potential claims or litigation against us, any claim or litigation regarding our intellectual property and proprietary rights could be costly and time-consuming and divert the attention of our management and key personnel from our business operations. Such disputes, with or without merit, could also cause potential customers to refrain from purchasing our products or otherwise cause us reputational harm.

We do not currently have a large patent portfolio, which could prevent us from deterring patent infringement claims through our own patent portfolio, and our competitors and others may now and in the future have significantly larger and more mature patent portfolios than we have. Any litigation may also involve non-practicing entities, patent holding companies, or other adverse patent owners. We cannot predict the outcome of lawsuits and cannot ensure that the results of any such actions will not have an adverse effect on our business, financial condition, or results of operations.

We rely on third-party software and intellectual property licenses.

Our products include software and other intellectual property and proprietary rights licensed from third parties. It may be necessary in the future to seek or renew licenses relating to various aspects of our products. We have the expectation, based on experience and standard industry practice, that such licenses generally can be obtained on commercially reasonable terms. However, there can be no assurance that the necessary licenses would be available on commercially reasonable terms, if at all. Our inability to obtain certain licenses or other rights or to obtain such licenses or rights on favorable terms could have a material adverse effect on our business, operating results, and financial conditions. In any such case, we may be required to seek licenses to other software or intellectual property or proprietary rights from other parties and re-design our products to function with such technology, or develop replacement technology ourselves, which could result in increased costs and product delays. We may also be forced to limit the features available in our current or future products. Moreover, incorporating intellectual property or proprietary rights licensed from third parties on a nonexclusive basis in our products, including our software, could limit our ability to protect our intellectual property and proprietary rights in our products and our ability to restrict third parties from developing similar or competitive technology using the same third-party intellectual property or proprietary rights.

If we are unable to obtain, maintain, protect, or enforce our intellectual property and proprietary rights, our competitive position could be harmed or we could be required to incur significant expenses.

Our ability to compete effectively is dependent in part upon our ability to obtain, maintain, protect, and enforce our intellectual property and other proprietary rights, including proprietary technology. We establish and protect our intellectual property and proprietary rights, including our proprietary information and technology, through a combination of licensing agreements, third-party nondisclosure agreements, confidentiality procedures, and other contractual provisions, as well as

through patent, trademark, trade dress, copyright, trade secret, and other intellectual property laws in the U.S. and similar laws in other countries. However, the steps we take to obtain, maintain, protect, and enforce our intellectual property and proprietary rights may be inadequate. There can be no assurance that these protections will be available in all cases or will be adequate to prevent our competitors or other third parties from copying, reverse engineering, accessing, or otherwise obtaining and using our technology, intellectual property, or proprietary rights or products without our permission. The laws of some foreign countries, including countries in which our products are sold, may not be as protective of intellectual property and proprietary rights as those in the U.S., and mechanisms for enforcement of intellectual property and proprietary rights may be inadequate. There can be no assurance that our competitors will not independently develop technologies that are substantially equivalent or superior to our technology or design around our intellectual property and proprietary rights. In each case, our ability to compete could be significantly impaired.

In addition, third parties may seek to challenge, invalidate, or circumvent our patents, trademarks, copyrights, trade secrets, or other intellectual property and proprietary rights, or any applications for any of the foregoing, including through administrative processes such as re-examination, inter partes review, interference and derivation proceedings and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings), or litigation. The legal standards relating to the validity, enforceability, and scope of protection of intellectual property and proprietary rights are uncertain and still evolving. There can be no assurance that our patent applications will result in issued patents or whether the examination process will require us to narrow the scope of the claims sought. In addition, our issued patents, and any patents issued from our pending or future patent applications or licensed to us in the future may not provide us with competitive advantages, may be successfully challenged, invalidated, or circumvented by third parties, or may not prove to be enforceable in actions brought against alleged infringers. The value of our intellectual property and proprietary rights could also diminish if others assert rights therein or ownership thereof, and we may be unable to successfully resolve any such conflicts in our favor or to our satisfaction.

To prevent substantial unauthorized use of our intellectual property and proprietary rights, it may be necessary to prosecute actions for infringement, misappropriation, and/or other violation of our intellectual property and proprietary rights against third parties. Any such action may be time-consuming and could result in significant costs and diversion of our resources and management's attention, and there can be no assurance that we will be successful in such action, even when our rights have been infringed, misappropriated, or otherwise violated. Further, our efforts to enforce our intellectual property and proprietary rights may be met with defenses, counterclaims, and countersuits attacking the validity and enforceability of our intellectual property and proprietary rights, and if such defenses, counterclaims, or countersuits are successful, we could lose valuable intellectual property and proprietary rights.

Furthermore, many of our current and potential competitors have the ability to dedicate substantially greater resources to enforce their intellectual property and proprietary rights than we do. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing, misappropriating, or otherwise violating our intellectual property and proprietary rights. Although we enter into confidentiality and invention assignment agreements with our employees and consultants and enter into confidentiality agreements with other third parties, including customers and third-party service providers, we cannot guarantee that we have entered into such agreements with each party that has or may have had access to our proprietary information, know-how, and trade secrets. Moreover, no assurance can be given that these agreements will be effective in controlling access to, distribution, use, misuse, misappropriation, reverse engineering, or disclosure of our proprietary information, know-how, and trade secrets. Further, these agreements may not prevent our competitors from independently developing technologies that are substantially equivalent or superior to our products and platform capabilities. These agreements may be breached, and we may not have adequate remedies for any such breach.

Our use of open source software could impose limitations on our ability to commercialize our products or subject us to litigation or other actions.

Our products contain software modules licensed for use from third-party authors under open source licenses, including MIT, Berkley Software Distribution, and others, and we expect to continue to incorporate open source software in our products in the future. Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement, misappropriation, or other violation claims or the quality of the code. Some open source licenses contain requirements that we make available the source code of modifications or derivative works we create based upon, incorporating or using the type of open source software we use and that we license such modifications or derivative works under the terms of the applicable open source licenses. If we fail to comply, or are alleged to have failed to comply, with the terms and conditions of our open source licenses, we could be required to incur significant legal expenses defending such allegations, subject to significant damages, enjoined from the sale of our proprietary products and required to comply with onerous conditions or restrictions on our proprietary products, any of which could be disruptive to our business.

Moreover, if we combine our proprietary products with open source software in a certain manner, we could, under certain of the open source licenses, be required to release the source code of our proprietary products to the public or offer our products to users at no cost. This could allow our competitors to create similar products with lower development effort and time and ultimately could result in a loss of sales for us. We cannot ensure that we have not incorporated open source software in our software in a manner that is inconsistent with the terms of the applicable license or our current policies, and we may inadvertently use open source in a manner that we do not intend or that could expose us to claims for breach of contract or intellectual property infringement, misappropriation, or other violation. Certain versions and libraries of open source software allow for any individuals to make general contributions and updates, and the use of such open source software may introduce or amplify certain security vulnerabilities, depending on how, and with which systems, it is implemented. Although we have established policies to regulate the use and incorporation of open source software into our platform, we cannot be certain that we have not incorporated open source software in our platform in a manner that is inconsistent with such policies.

The terms of many open source licenses have not been interpreted by U.S. courts, and there is a risk that such licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our products. In such an event, we could be required to seek licenses from third parties in order to continue offering our products, re-engineer our products, discontinue the sale of our products in the event re-engineering cannot be accomplished on a timely basis, or make generally available, in source code form, all or a portion of our proprietary source code, any of which could materially and adversely affect our business and operating results.

Risks Related to Laws and Regulations

We provide our products to state and local governments and to a lesser extent federal government agencies, and heavily regulated organizations in the U.S. and in foreign jurisdictions; as a result, we face risks related to the procurement process budget decisions driven by statutory and regulatory determinations, termination of contracts, and compliance with government contracting requirements.

We sell our products and provide limited services to a number of state and local government entities (including, primarily, educational institutions) and, in limited instances, the U.S. government. We additionally have customers who operate in heavily-regulated organizations who procure our software products both through our partners and directly, and we have made, and may continue to make, significant investments to support future sales opportunities in these sectors. Doing business with government entities presents a variety of risks. Among other risks, the procurement process for governments and their agencies is highly competitive, can be time-consuming, requires us to incur significant up-front time and expense, and subjects us to additional compliance risks and costs, without any assurance that we (or a third-party reseller) will win a contract. Beyond this, demand for our products and services may be impacted by public sector budgetary cycles and funding availability, impacts of macroeconomic and geopolitical conditions, and funding in any given fiscal cycle may be reduced or delayed, including in connection with an extended federal government shutdown, which could adversely impact demand for our products and services. In addition, public sector and heavily-regulated customers may have contractual, statutory, or regulatory rights to terminate current contracts with us or our third-party distributors or resellers for convenience or due to a default. If a contract is terminated for convenience, we may only be able to collect fees for products or services delivered prior to termination and settlement expenses. If a contract is terminated due to a default, we may be liable for excess costs incurred by the customer for procuring alternative products or services or be precluded from doing further business with government entities. Further, entities providing services to governments are required to comply with a variety of complex laws, regulations, and contractual provisions relating to the formation, administration, or performance of government contracts that give public sector customers substantial rights and remedies, many of which are not typically found in commercial contracts. These may include rights with respect to price protection, the accuracy of information provided to the government, contractor compliance with supplier diversity policies, and other terms that are particular to government contracts, such as termination rights. These rules may apply to us and/or third parties through whom we resell our products and services and whose practices we may not control, where such parties' non-compliance could impose repercussions with respect to contractual and customer satisfaction issues. Federal, state, and local governments routinely investigate and audit contractors for compliance with these requirements. If, as a result of an audit or review, it is determined that we have failed to comply with these requirements, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, cost associated with the triggering of price reduction clauses, fines and suspensions, or debarment from future government business, and we may suffer harm to our reputation.

Our customers also include a number of non-U.S. governments. Similar procurement, budgetary, contract, and audit risks that apply in the context of U.S. government contracting also apply to our doing business with these entities, particularly in certain emerging markets where our customer base is less established. In addition, compliance with complex regulations and contracting provisions in a variety of jurisdictions can be expensive and consume significant management resources. In certain

jurisdictions, our ability to win business may be constrained by political and other factors unrelated to our competitive position in the market. Additionally, many of our current and prospective customers, such as those in the financial services and health care industries, are highly regulated and may be required to comply with more stringent regulations in connection with subscribing to and implementing our services. Each of these difficulties could result in substantial compliance burdens and could materially adversely affect our business and results of operations.

We are subject to export controls and economic sanctions laws, and our customers and channel partners are subject to import controls that could subject us to liability if we are not in full compliance with applicable laws.

Certain of our products are subject to U.S. export controls, and we would be permitted to export such products to certain countries outside the U.S. only by first obtaining an export license from the U.S. government, or by utilizing an existing export license exception, or after clearing U.S. government agency review. Obtaining the necessary export license or accomplishing a U.S. government review for a particular export may be time-consuming and may result in the delay or loss of sales opportunities. Furthermore, U.S. export control laws and economic sanctions, including economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Control, prohibit the sale or supply of our products and services to U.S. embargoed or sanctioned countries, regions, governments, persons, and entities.

Although we take precautions to prevent our solutions from being provided in violation of U.S. export control and economic sanctions laws, our solutions may have been in the past, and could in the future be, provided inadvertently in violation of such laws. If we were to fail to comply with U.S. export law requirements, U.S. customs regulations, U.S. economic sanctions, or other applicable U.S. laws, we could be subject to substantial civil and criminal penalties, including fines, incarceration for responsible employees and managers, and the possible loss of export or import privileges. U.S. export controls, sanctions, and regulations apply to our channel partners as well as to us. Any failure by our channel partners to comply with such laws, regulations, or sanctions could have negative consequences, including reputational harm, government investigations, and penalties.

Changes in our products or changes in export and import regulations may create delays in the introduction of our products into international markets, prevent our customers with international operations from deploying our products globally, or, in some cases, prevent the export or import of our products to certain countries, governments, or persons altogether. In addition, any change in export or import regulations, economic sanctions, or related legislation, shift in the enforcement, or scope of existing regulations, or change in the countries, governments, persons, or technologies targeted by such regulations, could result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or potential customers with international operations. Any decreased use of our products or limitation on our ability to export or sell our products would likely adversely affect our business, financial condition, and operating results.

We are subject to anti-corruption, anti-bribery, and similar laws, and non-compliance with such laws can subject us to criminal penalties or significant fines and harm our business and reputation.

We are subject to anti-corruption, anti-bribery, and similar laws, such as the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, the U.K. Bribery Act 2010, and other anti-corruption, anti-bribery, and anti-money laundering laws in countries in which we conduct activities. Anti-corruption and anti-bribery laws have been enforced aggressively in recent years and are interpreted broadly and prohibit companies and their employees and agents from promising, authorizing, making, offering, soliciting, or accepting, directly or indirectly, improper payments or other improper benefits to or from any person whether in the public or private sector. As we increase our international sales and business, our risks under these laws may increase. Noncompliance with these laws could subject us to investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, adverse media coverage, and other consequences. Any investigations, actions, or sanctions could adversely affect our business, results of operations, and financial condition.

Changes in tax laws or regulations in the various tax jurisdictions we are subject to that are applied adversely to us or our customers could increase the costs of our products and harm our business.

Our corporate structure and associated transfer pricing policies anticipate future growth into the international markets. The amount of taxes we pay in different jurisdictions may depend on the application of the tax laws of the various jurisdictions, including the U.S., to our international business activities, changes in tax rates, new or revised tax laws or interpretations of existing tax laws and policies, and our ability to operate our business in a manner consistent with our corporate structure and intercompany arrangements. The taxing authorities of the jurisdictions in which we operate may challenge our methodologies for pricing intercompany transactions, which are generally required to be computed on an arm's-length basis pursuant to

intercompany arrangements, or disagree with our determinations as to the income and expenses attributable to specific jurisdictions. If such a challenge or disagreement were to occur, and our position was not sustained, we could be required to pay additional taxes, interest, and penalties, which could result in one-time tax charges, higher effective tax rates, reduced cash flows, and lower overall profitability of our operations. Our financial statements could fail to reflect adequate reserves to cover such a contingency.

As we continue to develop and grow our business, in particular internationally, our success will depend in part on our ability to anticipate and effectively manage these risks. New income, sales, use or other tax laws, statutes, rules, regulations, or ordinances could be enacted at any time. Those enactments could harm our domestic and international business operations, and our business and financial performance. Further, existing tax laws, statutes, rules, regulations, or ordinances could be interpreted, changed, modified, or applied adversely to us. These events could require us or our customers to pay additional tax amounts on a prospective or retroactive basis, as well as require us or our customers to pay fines and/or penalties and interest for past amounts deemed to be due. If we raise our prices to offset the costs of these changes, existing and potential future customers may elect not to purchase our products in the future. Additionally, new, changed, modified, or newly interpreted or applied tax laws could increase our customers' and our compliance, operating, and other costs, as well as the costs of our products. Further, these events could decrease the capital we have available to operate our business. Any or all of these events could harm our business and financial performance.

Our ability to use our net operating losses to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the Code, a corporation that undergoes an "ownership change" is subject to annual limitations on its ability to utilize its pre-change NOLs to offset future taxable income. Our ability to utilize the Company's current U.S. federal NOLs may be limited under Section 382 of the Code. If we undergo an ownership change, our ability to utilize NOLs could be further limited by Section 382 of the Code. Future changes in our stock ownership, many of which are outside of our control, could result in an ownership change under Section 382 of the Code. Furthermore, our ability to utilize NOLs of companies that we have acquired, or may acquire in the future, may be subject to limitations. For these reasons, we may not be able to utilize a material portion of the NOLs, even if we were to achieve profitability.

Our NOL carryforwards may be unavailable to offset future taxable income because of restrictions under U.S. tax law. NOLs generated in taxable years ending on or prior to December 31, 2017 are only permitted to be carried forward for 20 taxable years under applicable U.S. federal tax law. Under current law, our federal NOLs generated in taxable years ending after December 31, 2017 may be carried forward indefinitely and NOLs arising in taxable years beginning after December 31, 2017 and before January 1, 2021 may be carried back to each of the five taxable years preceding the tax year of such loss, but NOLs arising in taxable years beginning after December 31, 2020 may not be carried back. In addition, for taxable years beginning after December 31, 2020, the deductibility of federal NOLs generated in taxable years beginning after December 31, 2017 is limited to 80% of current year taxable income.

Risks Related to Our Financial Reporting and Capital Resources

Seasonality may cause fluctuations in our revenue.

We believe there are seasonal factors that may cause us to record higher revenue in some quarters compared with others. We believe this variability is largely due to our customers' budgetary and spending patterns, as many customers spend the unused portions of their discretionary budgets prior to the end of their fiscal years. For example, we have historically recorded our highest level of total revenue in our fourth quarter, which we believe corresponds to the fourth quarter of a majority of our enterprise customers. We have historically received a higher number of orders from education customers in the summer months to coincide with their fiscal year end. As our rate of growth has slowed, seasonal or cyclical variations in our operations may become more pronounced, and our business, results of operations, and financial position may be adversely affected.

Our quarterly operating results and other metrics may vary significantly and be unpredictable, which could cause the trading price of our stock to decline.

Our operating results and other metrics have historically varied from period to period, and we expect that they will continue to do so as a result of a number of factors, many of which are outside of our control and may be difficult to predict.

As a result, we may experience significant fluctuations in our financial and other operating results, including fluctuations in our key metrics. This variability and unpredictability could result in our failing to meet the expectations of

securities analysts or investors for any period. If we fail to meet or exceed such expectations for these or any other reasons, the market price of our shares could fall substantially and we could face costly lawsuits, including securities class action suits.

We may fail to meet or exceed the expectations of securities analysts and investors, and the market price for our common stock could decline. If one or more of the securities analysts who cover us change their recommendation regarding our stock adversely, the market price for our common stock could decline. Additionally, our stock price may be based on expectations, estimates, or forecasts of our future performance that may be unrealistic or may not be achieved. Further, our stock price may be affected by financial media, including press reports and blogs.

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

We prepare our consolidated financial statements in accordance with GAAP. 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. See Part II, Item 8, “Financial Statements and Supplementary Data — Summary of significant accounting policies” for more information.

Our revenue recognition and other factors may impact our financial results in any given period and make them difficult to predict.

We recognize revenue under ASC 606 when or as performance obligations are satisfied. We derive revenue primarily from sales of SaaS subscriptions and support and maintenance contracts and, to a lesser extent, sales of on-premise term-based subscriptions and perpetual licenses and services. Subscription revenue consists of sales of SaaS subscriptions and on-premise term-based subscription licenses as well as support and maintenance contracts. We recognize subscription revenue ratably over the term of the applicable agreement, provided that all other revenue recognition criteria have been satisfied. License revenue consists of revenue from on-premise perpetual licenses of our Jamf Pro product sold primarily to existing customers. We recognize license revenue upfront, assuming all revenue recognition criteria are satisfied. Services revenue consists primarily of professional services provided to our customers to configure and optimize the use of our software solutions, as well as training services related to the operation of our software solutions, which is recognized as the services are performed. Our application of ASC 606 with respect to the nature of future contractual arrangements could impact the forecasting of our revenue for future periods, as both the mix of products and services we will sell in a given period, as well as the size of contracts, is difficult to predict.

Consequently, a shortfall in sales of our SaaS subscription and support and maintenance contracts in any quarter may not significantly reduce our subscription revenues for that quarter but may negatively affect subscription revenues in future quarters. Accordingly, the effect of significant downturns in sales of our SaaS subscription and support and maintenance contracts may not be fully reflected in our results of operations until future periods. We may be unable to adjust our cost structure to compensate for this potential shortfall in subscription revenues. Our revenue recognition model for our SaaS subscription and support and maintenance contracts also makes it difficult for us to rapidly increase our revenues through additional sales in any period, as a significant amount of our revenues are recognized over the applicable agreement term.

Furthermore, the presentation of our financial results requires us to make estimates and assumptions that may affect revenue recognition. In some instances, we could reasonably use different estimates and assumptions and changes in estimates may occur from period to period. See Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Estimates — Revenue Recognition.”

Given the foregoing factors, comparing our revenue and operating results on a period-to-period basis may not be meaningful, and our past results may not be indicative of our future performance.

Impairment of goodwill and other intangible assets would result in a decrease in earnings.

We have in the past, and may in the future, acquire intangible assets. Current accounting rules require that goodwill and other intangible assets with indefinite useful lives that are not amortized be tested for impairment at least annually. These rules also require that intangible assets with definite useful lives be amortized over their respective estimated useful lives to their estimated residual values and reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Events and circumstances considered in determining whether the carrying value of amortizable intangible assets and goodwill may not be recoverable include, but are not limited to, significant changes in performance relative to expected operating results, significant changes in the use of the assets, significant negative industry

or economic trends, significant impacts to the economy (such as inflationary pressures), or a significant decline in our stock price and/or market capitalization for a sustained period of time. To the extent such evaluation indicates that the useful lives of intangible assets are different than originally estimated, the amortization period is reduced or extended and the quarterly amortization expense is increased or decreased. Any impairment charges or changes to estimated amortization periods could have a material adverse effect on our financial results.

We have identified a material weakness in our internal control over financial reporting and, if we are unable to remediate this material weakness, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect investor confidence in us and, as a result, the value of our common stock.

As disclosed in Part II, Item 9A, “Controls and Procedures,” we have identified a material weakness in internal control over financial reporting. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company’s annual or interim financial statements will not be prevented or detected on a timely basis. Because the control deficiency described below could have resulted in a material misstatement of our annual or interim financial statements, we determined that this deficiency constitutes a material weakness.

During the fourth quarter of 2022, we identified that we did not design nor maintain effective IT general controls for the financial IT applications used for revenue recognition by Wandera, which we acquired in July 2021. Specifically, we did not design and maintain access controls related to maintaining appropriate segregation of duties and user access, as well as controls related to change management over IT program and data changes. Wandera accounts for less than 5% of our consolidated total revenue, and the material weakness did not result in any misstatements to our interim or annual financial statements.

We are working to remediate this material weakness in our internal control over financial reporting. We are in the process of implementing and testing new controls over the financial IT applications used by Wandera. These controls include authorization of changes to financial IT applications and enhanced user access controls to ensure appropriate segregation of duties. The material weakness will not be considered remediated until a sustained period of time has passed to allow management to test the design and operational effectiveness of the new controls.

We may discover additional material weaknesses that require additional time and resources to remediate and we may decide to take additional measures to address the material weaknesses or modify the remediation steps described above. The existence of any material weakness, including our existing material weakness described above, or significant deficiency requires management to devote significant time and incur significant expense to remediate any such material weaknesses or significant deficiencies and management may not be able to remediate any such material weaknesses or significant deficiencies in a timely manner. The existence of any material weakness in our internal control over financial reporting could also result in errors in our financial statements that could require us to restate our financial statements, cause us to fail to meet our reporting obligations, and cause shareholders to lose confidence in our reported financial information, all of which could materially and adversely affect our business and stock price.

We are subject to SEC rules and regulations regarding our internal control over financial reporting. If we fail to maintain effective internal control over financial reporting and disclosure controls and procedures or identify material weaknesses in our internal control over financial reporting, we may not be able to accurately report our financial results, or report them in a timely manner.

SOX requires that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, we must perform system and process evaluation, document our controls, and perform testing of our key control over financial reporting to allow management and our independent public accounting firm to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of SOX.

The process of designing and implementing internal control over financial reporting required to comply with Section 404 of the SOX has been, and will continue to be, time consuming, costly, and complicated and has and will require significant accounting expense and management effort. We will continue to dedicate management effort and other internal resources, invest in more robust technology, and engage outside consultants to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting and to compile the system and process documentation necessary to perform the evaluation needed to comply with Section 404. However, we cannot assure you that in future periods, after we remediate the current material weakness, our independent registered public accounting firm will be able to attest to the effectiveness of our internal control over financial

reporting. We may not be able to remediate any material weaknesses that may be identified, or to complete our evaluation, testing, and any required remediation in a timely fashion and our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our controls are documented, designed, or operating.

If our senior management continues to be unable to conclude in future periods that we have effective internal control over financial reporting or to certify the effectiveness of such controls or if our independent registered public accounting firm cannot render an unqualified opinion on management's assessment and the effectiveness of our internal control over financial reporting, we could be subject to regulatory scrutiny, a loss of public and investor confidence, and to litigation from investors and stockholders, which could have a material adverse effect on our business and our stock price. In addition, if we do not maintain adequate financial and management personnel, processes, and controls, we may not be able to manage our business effectively or accurately report our financial performance on a timely basis, which could cause a decline in our common stock price, adversely affect our results of operations and financial condition, and/or restrict our future access to the capital markets.

Our indebtedness could adversely affect our business and growth prospects.

As of December 31, 2022, we had total current and long-term indebtedness of \$365.5 million, including (i) \$364.5 million outstanding aggregate principal amount of the 2026 Notes, (ii) no borrowings outstanding under our 2020 Revolving Credit Facility, and (iii) \$1.0 million of outstanding letters of credit under our 2020 Revolving Credit Facility. In addition, as of December 31, 2022, we had \$149.0 million of additional borrowing capacity under our 2020 Revolving Credit Facility. Our indebtedness, or any additional indebtedness we may incur, could require us to divert funds identified for other purposes for debt service and impair our liquidity position. If we cannot generate sufficient cash flow from operations to service our debt, we may need to refinance our debt, dispose of assets, or issue equity to obtain necessary funds. We do not know whether we will be able to take any of these actions on a timely basis, on terms satisfactory to us or at all.

Our existing and future indebtedness, the cash flow needed to satisfy such indebtedness, and the covenants governing such indebtedness could have important consequences, including:

- limiting funds otherwise available for financing our capital expenditures by requiring us to dedicate a portion of our cash flows from operations to the repayment of debt and the interest on this debt;
- limiting our ability to incur additional indebtedness;
- limiting our ability to capitalize on significant business opportunities;
- making us more vulnerable to rising interest rates; and
- making us more vulnerable in the event of a downturn in our business.

Fluctuations in interest rates can increase borrowing costs. Increases in interest rates may directly impact the amount of interest we are required to pay and reduce earnings accordingly. In addition, developments in tax policy, such as the disallowance of tax deductions for interest paid on outstanding indebtedness, could have an adverse effect on our liquidity and our business, financial conditions, and results of operations. Further, our existing debt agreements contain customary affirmative and negative covenants and certain restrictions on operations that could impose operating and financial limitations and restrictions on us, including restrictions on our ability to enter into particular transactions and to engage in other actions that we may believe are advisable or necessary for our business.

We expect to use cash flow from operations to meet current and future financial obligations, including funding our operations, debt service requirements, and capital expenditures. The ability to make these payments depends on our financial and operating performance, which is subject to prevailing economic, industry, and competitive conditions and to certain financial, business, economic, and other factors beyond our control.

Despite our current debt levels, we may still incur substantially more debt or take other actions which would intensify the risks discussed above.

Despite our current consolidated debt levels, we may be able to incur substantial additional debt in the future, subject to the restrictions contained in our debt instruments, some of which may be secured debt. We are not restricted under the terms of the 2026 Notes Indenture from incurring additional debt, securing existing or future debt, recapitalizing our debt, or taking a number of other actions that are not limited by the terms of the 2026 Notes Indenture that could have the effect of diminishing

our ability to make payments on our debt, including the 2026 Notes, when due. The 2020 Credit Agreement restricts our ability to incur certain additional indebtedness, including secured indebtedness, but if the 2020 Credit Agreement matures or is repaid, we may not be subject to such restrictions under the terms of any subsequent indebtedness.

We may not have the ability to raise the funds necessary to settle conversions of the 2026 Notes in cash or to repurchase the 2026 Notes upon a fundamental change, and our future debt may contain limitations on our ability to pay cash upon conversion or repurchase of the 2026 Notes.

Holders of the 2026 Notes will have the right, subject to certain conditions and limited exceptions, to require us to repurchase all or a portion of their 2026 Notes upon the occurrence of a fundamental change at a fundamental change repurchase price equal to 100% of the principal amount of the 2026 Notes to be repurchased, plus accrued and unpaid interest, if any, as provided in the 2026 Notes Indenture. In addition, upon conversion of the 2026 Notes, unless we elect to deliver solely shares of our common stock to settle such conversion (other than paying cash in lieu of delivering any fractional share), we will be required to make cash payments in respect of the 2026 Notes being converted as provided in the 2026 Notes Indenture. However, we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of 2026 Notes surrendered therefor or pay cash with respect to 2026 Notes being converted. In addition, our ability to repurchase the 2026 Notes or to pay cash upon conversions of the 2026 Notes may be limited by law, by regulatory authority, or by agreements governing our future indebtedness. Our failure to repurchase 2026 Notes at a time when the repurchase is required by the 2026 Notes Indenture or to pay any cash payable on future conversions of the 2026 Notes as required by the 2026 Notes Indenture would constitute a default under the 2026 Notes Indenture. A default under the 2026 Notes Indenture or the fundamental change itself could also lead to a default under agreements governing our future indebtedness. If the repayment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the 2026 Notes or make cash payments upon conversions thereof.

The conditional conversion feature of the 2026 Notes, if triggered, may adversely affect our financial condition and operating results.

In the event the conditional conversion feature of the 2026 Notes is triggered, holders of such notes will be entitled to convert their 2026 Notes at any time during specified periods at their option, described in the 2026 Notes Indenture. If one or more holders elect to convert their notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our common stock (other than paying cash in lieu of delivering any fractional share), we would be required to settle a portion or all of our conversion obligation through the payment of cash, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the 2026 Notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

Conversion of the 2026 Notes may dilute the ownership interest of our shareholders or may otherwise depress the price of our common stock.

The conversion of some or all of the 2026 Notes may dilute the ownership interests of our shareholders. Upon conversion of the 2026 Notes, we have the option to pay or deliver, as the case may be, cash, shares of our common stock, or a combination of cash and shares of our common stock. If we elect to settle our conversion obligation in shares of our common stock or a combination of cash and shares of our common stock, any sales in the public market of our common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the 2026 Notes may encourage short selling by market participants because the conversion of the 2026 Notes could be used to satisfy short positions, or anticipated conversion of the 2026 Notes into shares of our common stock could depress the price of our common stock.

Changes in the accounting treatment for convertible debt securities that may be settled in cash, such as the 2026 Notes, could have a material effect on our reported financial results.

In August 2020, the FASB issued ASU No. 2020-06, which amends the accounting standards for convertible debt instruments that may be settled entirely or partially in cash upon conversion. ASU 2020-06 eliminates requirements to separately account for liability and equity components of such convertible debt instruments and eliminates the ability to use the treasury stock method for calculating diluted earnings per share for convertible instruments whose principal amount may be settled using shares. Instead, ASU 2020-06 requires (i) the entire amount of the security to be presented as a liability on the balance sheet and (ii) application of the “if-converted” method for calculating diluted earnings per share. Under the “if-converted” method, diluted earnings per share will generally be calculated assuming that all the 2026 Notes were converted

solely into shares of common stock at the beginning of the reporting period, unless the result would be anti-dilutive, which could adversely affect our diluted earnings per share. However, if the principal amount of the convertible debt security being converted is required to be paid in cash and only the excess is permitted to be settled in shares, the if-converted method will produce a similar result as the “treasury stock” method prior to the adoption of ASU 2020-06 for such convertible debt security.

We early adopted ASU 2020-06, and as such we do not bifurcate the liability and equity components of the 2026 Notes on our balance sheet and we use the if-converted method of calculating diluted earnings per share. In order to qualify for the alternative treatment of calculating diluted earnings per share under the “if-converted” method, we would have to irrevocably fix the settlement method for conversions to combination settlement with a specified dollar amount of at least \$1,000 per \$1,000 principal amount of the 2026 Notes, which would impair our flexibility to settle conversions of notes, require us to settle conversions in cash in an amount at least equal to the principal amount of notes converted and could adversely affect our liquidity.

We cannot be sure whether other changes may be made to the current accounting standards related to the 2026 Notes, or otherwise, that could have a material effect on our reported financial results.

Certain provisions in the 2026 Notes Indenture may delay or prevent an otherwise beneficial takeover attempt of us.

Certain provisions in the 2026 Notes Indenture may make it more difficult or expensive for a third party to acquire us. For example, the 2026 Notes Indenture will require us, except as provided in that indenture, to repurchase the 2026 Notes for cash upon the occurrence of a fundamental change and, in certain circumstances, to increase the conversion rate for a holder that converts its notes in connection with a make-whole fundamental change. A takeover of us may trigger the requirement that we repurchase the 2026 Notes and/or increase the conversion rate, which could make it more costly for a potential acquirer to engage in such takeover. Such additional costs may have the effect of delaying or preventing a takeover of us that would otherwise be beneficial to investors.

We entered into certain hedging positions that may affect the value of the 2026 Notes and the volatility and value of our common stock.

In connection with the issuance of the 2026 Notes, we entered into certain hedging positions with the option counterparties. These hedging positions are expected generally to reduce potential dilution of our common stock on any conversion of the 2026 Notes or offset any cash payments we are required to make in excess of the principal amount of such converted 2026 Notes, as the case may be, with such reduction or offset subject to a cap.

The option counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various derivatives with respect to our common stock or purchasing or selling our common stock in secondary market transactions prior to the maturity of the 2026 Notes (and are likely to do so during any observation period related to a conversion of 2026 Notes or following any repurchase of 2026 Notes by us on any fundamental change repurchase event or otherwise). This activity could cause or avoid an increase or a decrease in the market price of our common stock or the 2026 Notes. In addition, if any such hedging positions fail to become effective, the operation counterparties or their respective affiliates may unwind their hedge positions, which could adversely affect the value of our common stock.

We are subject to counterparty risk with respect to the capped call transactions.

The option counterparties are financial institutions, and we will be subject to the risk that any or all of them might default under the capped call transactions. Our exposure to the credit risk of the option counterparties will not be secured by any collateral. Past global economic conditions have resulted in the actual or perceived failure or financial difficulties of many financial institutions. If an option counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at that time under the capped call transactions with such option counterparty. Our exposure will depend on many factors but, generally, an increase in our exposure will be correlated to an increase in the market price and in the volatility of our common stock. In addition, upon a default by an option counterparty, we may suffer more dilution than we currently anticipate with respect to our common stock. We can provide no assurance as to the financial stability or viability of the option counterparties.

We may not be able to generate sufficient cash flow to service all of our indebtedness and may be forced to take other actions to satisfy our obligations under such indebtedness, which may not be successful.

Our ability to make any future scheduled payments or to refinance any future outstanding debt obligations depends on our financial and operating performance, which will be affected by prevailing economic, industry, and competitive conditions, as well as financial, business, and other factors beyond our control. We may not be able to maintain a sufficient level of cash flow from operating activities to permit us to pay the principal, premium, if any, and interest on our indebtedness. Any failure to make payments of interest and principal on any of our future outstanding indebtedness on a timely basis would harm our ability to incur additional indebtedness.

If our cash flows and capital resources are insufficient to fund any of our future debt service obligations, we may be forced to reduce or delay capital expenditures, sell assets, seek additional capital, or seek to restructure or refinance our indebtedness. Any such refinancing could be at higher interest rates and may require us to comply with more onerous covenants. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. In the absence of such cash flows and resources, we could face substantial liquidity problems and might be required to sell material assets or operations to attempt to meet our debt service obligations. Our 2020 Credit Agreement includes certain restrictions on our ability to conduct asset sales and/or use the proceeds from asset sales for general corporate purposes. We may not be able to consummate these asset sales to raise capital or sell assets at prices and on terms that we believe are fair and any proceeds that we do receive may not be adequate to meet any debt service obligations then due. If we cannot meet our debt service obligations, the holders of our indebtedness may accelerate such indebtedness and, to the extent such indebtedness is secured, foreclose on our assets. In such an event, we may not have sufficient assets to repay all of our indebtedness.

The terms of the 2020 Credit Agreement restrict our current and future operations, particularly our ability to respond to changes or to take certain actions.

Our 2020 Credit Agreement contains a number of restrictive covenants that impose significant operating and financial restrictions on us and may limit our ability to engage in acts that may be in our long-term best interests, including restrictions on our ability to:

- incur certain additional indebtedness;
- pay dividends on or make distributions in respect of capital stock or repurchase or redeem capital stock;
- prepay, redeem, or repurchase certain indebtedness;
- make loans and investments;
- sell or otherwise dispose of assets, including capital stock of restricted subsidiaries;
- incur liens;
- enter into transactions with affiliates;
- enter into agreements restricting the ability of our subsidiaries to pay dividends; and
- consolidate, merge, or sell all or substantially all of our assets.

The restrictive covenants in the 2020 Credit Agreement require us to maintain specified financial ratios and satisfy other financial condition tests to the extent applicable. Our ability to meet those financial ratios and tests can be affected by events beyond our control.

A breach of the covenants or restrictions under the 2020 Credit Agreement could result in an event of default under such agreement. In the event the holders of our indebtedness accelerate the repayment, we may not have sufficient assets to repay that indebtedness or be able to borrow sufficient funds to refinance it. Even if we are able to obtain new financing, it may not be on commercially reasonable terms or on terms acceptable to us. As a result of these restrictions, we may be:

- limited in how we conduct our business;

- unable to raise additional debt or equity financing to operate during general economic or business downturns; or
- unable to compete effectively or to take advantage of new business opportunities.

These restrictions, along with similar restrictions that may be contained in agreements evidencing or governing other future indebtedness, may affect our ability to grow in accordance with our growth strategy.

Our failure to raise additional capital or generate cash flows necessary to expand our operations and invest in new technologies in the future could reduce our ability to compete successfully and harm our results of operations.

We may need to raise additional funds, and we may not be able to obtain additional debt or equity financing on favorable terms or at all. If we raise additional equity financing, our security holders may experience significant dilution of their ownership interests. If we engage in additional debt financing, we may be required to accept terms that restrict our ability to incur additional indebtedness, force us to maintain specified liquidity or other ratios, or restrict our ability to pay dividends or make acquisitions. If we need additional capital and cannot raise it on acceptable terms, or at all, we may not be able to, among other things:

- develop and enhance our products;
- continue to expand our product development, sales, and marketing organizations;
- hire, train, and retain employees;
- respond to competitive pressures or unanticipated working capital requirements; or
- pursue acquisition opportunities.

In addition, our 2020 Credit Agreement also limits our ability to incur certain additional debt and therefore we may need to amend our 2020 Credit Agreement or issue additional equity to raise capital. If we issue additional equity, your interest in us will be diluted.

We may face exposure to foreign currency exchange rate fluctuations.

Today, our international contracts are denominated in U.S. dollars and local currencies, and the majority of our international costs are denominated in local currencies. Over time, it is possible that an increasing portion of our international contracts may be denominated in local currencies. Therefore, fluctuations in the value of the U.S. dollar and foreign currencies may affect our results of operations when translated into U.S. dollars. We do not currently engage in currency hedging activities to limit the risk of exchange rate fluctuations. However, in the future, we may use derivative instruments, such as foreign currency forward and option contracts, to hedge certain exposures to fluctuations in foreign currency exchange rates. The use of such hedging activities may not offset any or more than a portion of the adverse financial effects of unfavorable movements in foreign exchange rates over the limited time the hedges are in place. Moreover, the use of hedging instruments may introduce additional risks if we are unable to structure effective hedges with such instruments.

Risks Related to Ownership of Our Common Stock

Vista owns a large portion of our common stock and thus can influence certain of our corporate actions, and its interests may conflict with ours or yours in the future.

As of December 31, 2022, Vista beneficially owned approximately 44.1% of our common stock. Our bylaws provide that Vista has the right to designate the Chair of our Board for so long as Vista beneficially owns at least 30% or more of the voting power of the then outstanding shares of our capital stock then entitled to vote generally in the election of directors. Even though Vista does not own shares of our stock representing a majority of the total voting power, for so long as Vista continues to own a significant percentage of our stock, Vista will still be able to significantly influence the composition of our Board, including the right to designate the Chair of our Board, and the approval of actions requiring shareholder approval. Accordingly, for such period of time, Vista will have significant influence with respect to our management, business plans, and policies, including the appointment and removal of our officers, decisions on whether to raise future capital, and amending our charter and bylaws, which govern the rights attached to our common stock. In particular, for so long as Vista continues to own a significant percentage of our stock, Vista will be able to cause or prevent a change of control of us or a change in the

composition of our Board, including the selection of the Chair of our Board, and could preclude any unsolicited acquisition of us. The concentration of ownership could deprive you of an opportunity to receive a premium for your shares of common stock as part of a sale of us and ultimately might affect the market price of our common stock.

In addition, we are party to a director nomination agreement with Vista that provides Vista the right to designate: (i) all of the nominees for election to our Board for so long as Vista beneficially owns 40% or more of the total number of shares of our common stock it owned on the date of our IPO; (ii) a number of directors (rounded up to the nearest whole number) equal to 40% of the total directors for so long as Vista beneficially owns at least 30% and less than 40% of the total number of shares of our common stock it owned on the date of our IPO; (iii) a number of directors (rounded up to the nearest whole number) equal to 30% of the total directors for so long as Vista beneficially owns at least 20% and less than 30% of the total number of shares of our common stock it owned on the date of our IPO; (iv) a number of directors (rounded up to the nearest whole number) equal to 20% of the total directors for so long as Vista beneficially owns at least 10% and less than 20% of the total number of shares of our common stock it owned on the date of our IPO; and (v) one director for so long as Vista beneficially owns at least 5% and less than 10% of the total number of shares of our common stock it owned on the date of our IPO. The director nomination agreement also provides that Vista may assign such right to a Vista affiliate. The director nomination agreement prohibits us from increasing or decreasing the size of our Board without the prior written consent of Vista.

Vista and its affiliates engage in a broad spectrum of activities, including investments in the information and business services industry generally. In the ordinary course of their business activities, Vista and its affiliates may engage in activities where their interests conflict with our interests or those of our other shareholders, such as investing in or advising businesses that directly or indirectly compete with certain portions of our business or are suppliers or customers of ours. Our certificate of incorporation provides that none of Vista, any of its affiliates or any director who is not employed by us (including any non-employee director who serves as one of our officers in both his director and officer capacities) or its affiliates has any duty to refrain from engaging, directly or indirectly, in the same business activities or similar business activities or lines of business in which we operate. Vista also may pursue acquisition opportunities that may be complementary to our business, and, as a result, those acquisition opportunities may not be available to us. In addition, Vista may have an interest in pursuing acquisitions, divestitures, and other transactions that, in its judgment, could enhance its investment, even though such transactions might involve risks to you.

An active, liquid trading market for our common stock may not be sustained, which may limit your ability to sell your shares.

An active trading market for our shares may not be sustained. The failure of an active and liquid trading market to continue to develop and sustain would likely have a material adverse effect on the value of our common stock. The market price of our common stock may decline, and you may not be able to sell your shares of our common stock at or above the price you paid, or at all. An inactive market may also impair our ability to raise capital to continue to fund operations by issuing shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

Provisions of our corporate governance documents could make an acquisition of us more difficult and may prevent attempts by our shareholders to replace or remove our current management, even if beneficial to our shareholders.

In addition to Vista's beneficial ownership of 44.1% of our common stock as of December 31, 2022, our certificate of incorporation and bylaws and the DGCL contain provisions that could make it more difficult for a third party to acquire us, even if doing so might be beneficial to our shareholders. Among other things:

- these provisions allow us to authorize the issuance of undesignated preferred stock, the terms of which may be established and the shares of which may be issued without shareholder approval, and which may include supermajority voting, special approval, dividend, or other rights or preferences superior to the rights of shareholders;
- these provisions provide for a classified board of directors with staggered three-year terms;
- these provisions provide that, at any time when Vista beneficially owns, in the aggregate, less than 40% in voting power of our stock entitled to vote generally in the election of directors, directors may only be removed for cause, and only by the affirmative vote of holders of at least 66 2/3% in voting power of all the then-outstanding shares of our stock entitled to vote thereon, voting together as a single class;

- these provisions prohibit shareholder action by written consent from and after the date on which Vista beneficially owns, in the aggregate, less than 35% in voting power of our stock entitled to vote generally in the election of directors;
- these provisions provide that any amendment, alteration, rescission, or repeal of our bylaws by our shareholders will require the affirmative vote of the holders of at least 66 2/3% in voting power of all the then-outstanding shares of our stock entitled to vote thereon, voting together as a single class; and
- these provisions establish advance notice requirements for nominations for elections to our Board or for proposing matters that can be acted upon by shareholders at shareholder meetings; provided, however, at any time when Vista beneficially owns, in the aggregate, at least 10% in voting power of our stock entitled to vote generally in the election of directors, such advance notice procedure will not apply to it.

Our certificate of incorporation contains a provision that provides us with protections similar to Section 203 of the DGCL, and prevents us from engaging in a business combination with a person (excluding Vista and any of its direct or indirect transferees and any group as to which such persons are a party) who acquires at least 15% of our common stock for a period of three years from the date such person acquired such common stock, unless Board or shareholder approval is obtained prior to the acquisition. These provisions could discourage, delay, or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for you and other shareholders to elect directors of your choosing and cause us to take other corporate actions you desire, including actions that you may deem advantageous, or negatively affect the trading price of our common stock. In addition, because our Board is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our shareholders to replace current members of our management team.

These and other provisions in our certificate of incorporation, bylaws, and Delaware law could make it more difficult for shareholders or potential acquirers to obtain control of our Board or initiate actions that are opposed by our then-current Board, including delay or impede a merger, tender offer, or proxy contest involving our company. The existence of these provisions could negatively affect the price of our common stock and limit opportunities for you to realize value in a corporate transaction.

Our certificate of incorporation designates the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation that may be initiated by our shareholders, which could limit our shareholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our certificate of incorporation, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, or other employees to us or our shareholders, (3) any action asserting a claim against us arising pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws, or (4) any other action asserting a claim against us that is governed by the internal affairs doctrine; provided that for the avoidance of doubt, the forum selection provision that identifies the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation, including any "derivative action," will not apply to suits to enforce a duty or liability created by the Securities Act, the Exchange Act, or any other claim for which the federal courts have exclusive jurisdiction. Our certificate of incorporation further provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the provisions of our certificate of incorporation described above. The forum selection clause in our certificate of incorporation may have the effect of discouraging lawsuits against us or our directors and officers and may limit our shareholders' ability to obtain a favorable judicial forum for disputes with us. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business, financial condition, and results of operations.

Our operating results and stock price may be volatile, and the market price of our common stock may drop below the price you pay.

Our quarterly operating results are likely to fluctuate in the future. In addition, securities markets worldwide have experienced, and are likely to continue to experience, significant price and volume fluctuations. This market volatility, as well as general economic, market, or political conditions, could subject the market price of our shares to wide price fluctuations regardless of our operating performance. Our operating results and the trading price of our shares may fluctuate in response to

the various factors described herein, many of which are beyond our control, which may cause our operating results and the market price and demand for our shares to fluctuate substantially. Fluctuations in our quarterly operating results could limit or prevent investors from readily selling their shares and may otherwise negatively affect the market price and liquidity of our shares. In addition, in the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the company that issued the stock. If any of our shareholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. Such a lawsuit could also divert the time and attention of our management from our business, which could significantly harm our profitability and reputation.

Substantial blocks of our total outstanding shares may be sold into the market. If there are substantial sales of shares of our common stock, the price of our common stock could decline.

The price of our common stock could decline if there are substantial sales of shares of our common stock particularly sales by our directors, executive officers, and significant shareholders, if there is a large number of shares of our common stock available for sale, or if there is the perception that these sales could occur. As of December 31, 2022, we had 123,170,172 shares of our common stock outstanding. All of the shares of common stock sold in our IPO and follow-on offerings are available for sale in the public market. In addition, we have registered shares of common stock that we may issue under our equity compensation plans. Such shares can be freely sold in the public market upon issuance. Shares held by directors, executive officers, and other affiliates are subject to volume limitations under Rule 144 under the Securities Act and various vesting agreements. Further, the 2026 Notes may become in the future convertible at the option of their holders prior to their scheduled terms under certain circumstances. Any sales in the public market of the common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock.

In connection with our IPO, we entered into a registration rights agreement with Vista. Vista is entitled to request that we register Vista's shares in the future, subject to the terms and conditions of the registration rights agreement, and our executive officers may also elect to participate in such offerings from time to time. Vista is also entitled to participate in certain of our registered offerings, subject to the restrictions in the registration rights agreement. We will pay Vista's expenses in connection with Vista's exercise of these rights. These registration rights would facilitate the resale of such securities into the public market, and any such resale would increase the number of shares of our common stock available for public trading.

The market price of the shares of our common stock could decline as a result of the sale of a substantial number of our shares of common stock in the public market or the perception in the market that the holders of a large number of such shares intend to sell their shares.

In the future, we may also issue our securities in connection with investments or acquisitions. The number of shares issued in connection with an investment or acquisition could constitute a material portion of our then-outstanding common stock.

Because we have no current plans to pay regular cash dividends on our common stock for the foreseeable future, you may not receive any return on investment unless you sell your common stock for a price greater than that which you paid for it.

We do not anticipate paying any regular cash dividends on our common stock for the foreseeable future. Any decision to declare and pay dividends in the future will be made at the discretion of our Board and will depend on, among other things, our results of operations, financial condition, cash requirements, contractual restrictions, and other factors that our Board may deem relevant. In addition, our ability to pay dividends is, and may be, limited by covenants of our existing indebtedness and any future outstanding indebtedness we or our subsidiaries incur, including under our 2020 Credit Agreement. Therefore, any return on investment in our common stock is solely dependent upon the appreciation of the price of our common stock on the open market, which may not occur.

If securities or industry analysts do not publish research or reports about our business, if they adversely change their recommendations regarding our shares, or if our results of operations do not meet their expectations, our stock price and trading volume could decline.

The trading market for our shares is influenced by the research and reports that industry or securities analysts publish about us or our business. We do not have any control over these analysts. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline. Moreover, if one or more of the analysts who cover us downgrade our stock, or if our results of operations do not meet their expectations, our stock price could decline.

We may issue shares of preferred stock in the future, which could make it difficult for another company to acquire us or could otherwise adversely affect holders of our common stock, which could depress the price of our common stock.

Our certificate of incorporation authorizes us to issue one or more series of preferred stock. Our Board has the authority to determine the preferences, limitations, and relative rights of the shares of preferred stock and to fix the number of shares constituting any series and the designation of such series, without any further vote or action by our shareholders. Our preferred stock could be issued with voting, liquidation, dividend, and other rights superior to the rights of our common stock. The potential issuance of preferred stock may delay or prevent a change in control of us, discouraging bids for our common stock at a premium to the market price, and materially adversely affect the market price and the voting and other rights of the holders of our common stock.

General Risk Factors

Public health outbreaks, epidemics, pandemics, or other catastrophic events may disrupt our business.

Public health outbreaks, epidemics, or pandemics, such as the COVID-19 pandemic, could materially and adversely impact our business. The COVID-19 pandemic resulted in numerous countries, including in Europe, Asia and the U.S., declaring national emergencies. The outbreak and the corresponding public health measures undertaken by governments, businesses, and individuals to contain the spread of COVID-19 included orders to shelter-in-place and restrictions on travel and permitted business operations. While most of those restrictions have been relaxed, an increase in COVID-19 cases or variations thereof may result in the reinstatement of such restrictive measures. As the COVID-19 pandemic continues to evolve, its ultimate impact on our business is subject to change. A severe outbreak of COVID-19 or another pandemic or epidemic can disrupt our business and adversely materially impact our financial results.

Additionally, natural disasters or other catastrophic events may cause damage or disruption to our operations, international commerce, and the global economy, thus harming our business. In the event of a major earthquake, hurricane, or catastrophic event such as fire, power loss, telecommunications failure, cyberattack, war, or terrorist attack, we may be unable to continue our operations and may endure system interruptions, reputational harm, delays in our application development, lengthy interruptions in our products, breaches of data security, and loss of critical data, all of which could adversely affect our business, results of operations, and financial condition. In addition, the insurance and incident response capabilities we maintain may not be adequate to cover or mitigate our losses resulting from disasters or other business interruptions.

Increasing scrutiny and changing expectations from investors, lenders, customers, government regulators, and other market participants with respect to our ESG policies and activities may impose additional costs on us or expose us to additional risks.

Companies across all industries and around the globe are facing increasing scrutiny relating to their ESG policies, initiatives, and activities by investors, lenders, customers, government regulators, and other market participants. Regulatory requirements related to ESG have been issued in the E.U., its Member States, and other countries, particularly with respect to climate change, emission reduction, and environmental stewardship. In the U.S., amongst other regulatory efforts, in February 2021, the Acting Chair of the SEC issued a statement directing the Division of Corporation Finance to enhance its focus on climate-related disclosure in public company filings, and in March 2021, the SEC announced the creation of a Climate and ESG Task Force in the Division of Enforcement. In addition, increased scrutiny related to ESG, and actual and proposed ESG policies and regulations, including proposed new or enhanced requirements regarding the standardization of mandatory climate-, human capital-, and diversity-related disclosures for investors in the EU, the U.S., and other countries, will subject us to new regulatory and compliance costs. Historically, we have not incurred significant expenditures to comply with environmental or ESG laws, policies, and regulations. However, given the increase in the number and complexity of these policies and regulations, we expect our costs of compliance to increase. We risk damage to our brand and reputation, impacts to our ability to secure government contracts, or limited access to capital markets and loans if we fail to adapt to, or comply with, investor, lender, customer, or other stakeholder expectations and standards and potential government regulation with respect to ESG matters, including in areas such as diversity and inclusion, environmental stewardship, support for local communities, and corporate governance and transparency.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters are in Minneapolis, MN, where we lease 102,937 square feet of office space under a lease that expires in February of 2030. We have additional office locations in the U.S. and in various international countries where we lease a total of 185,645 square feet. These additional office locations in the U.S. include Eau Claire, WI; New York City, NY; San Francisco, CA; and Austin, TX. Our international offices are located in Poland, the Netherlands, Australia, Japan, Hong Kong, Taiwan, the UK, Sweden, the Czech Republic, India, and Israel. We believe that our facilities are adequate for our current needs.

Item 3. Legal Proceedings

The information set forth in “Note 8 — Commitments and contingencies” to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K is incorporated herein by reference.

From time to time, we may be subject to legal proceedings and claims that arise in the ordinary course of business, including patent, commercial, product liability, employment, class action, whistleblower, and other litigation and claims, as well as governmental and other regulatory investigations and proceedings. In addition, third parties may from time to time assert claims against us in the form of letters and other communications. Although the results of these proceedings, claims, inquiries, and investigations cannot be predicted with certainty, we do not believe that the final outcome of these matters is reasonably likely to have a material adverse effect on our business, financial condition, or results of operations. Our evaluation of any current matters may change in the future as the legal proceedings and claims and events related thereto unfold. Future litigation may be necessary to defend ourselves, our partners, and our customers by determining the scope, enforceability, and validity of third-party proprietary rights, or to establish our proprietary rights. The results of any current or future litigation cannot be predicted with certainty, and regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources, and other factors.

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 for Our Common Stock

Our common stock trades on the NASDAQ under the symbol “JAMF.”

Holders of Record

As of December 31, 2022, there were 36 holders of record of our common stock, including Cede & Co, a nominee for DTC, which holds shares of our common stock on behalf of an indeterminate number of beneficial owners. All of the shares of common stock held by brokerage firms, banks, and other financial institutions as nominees for beneficial owners are deposited into participant accounts at DTC and are considered to be held of record by Cede & Co. as one stockholder. Because many of our shares of common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of beneficial stockholders represented by these record holders.

Dividend Policy

We currently intend to retain all available funds and any future earnings to fund the development and growth of our business and, therefore, we do not anticipate paying any cash dividends in the foreseeable future. Additionally, our ability to pay dividends on our common stock is limited by restrictions on the ability of our subsidiaries to pay dividends or make distributions to us. Any future determination to pay dividends is at the discretion of our Board, subject to compliance with covenants in current and future agreements governing our and our subsidiaries’ indebtedness, and will depend on our results of operations, financial condition, capital requirements, and other factors that our Board may deem relevant.

Securities Authorized for Issuance Under Equity Compensation Plans

The information required by this item will be set forth in the Proxy Statement, which will be filed no later than 120 days after the end of our fiscal year ended December 31, 2022 and is incorporated in this Annual Report on Form 10-K by reference.

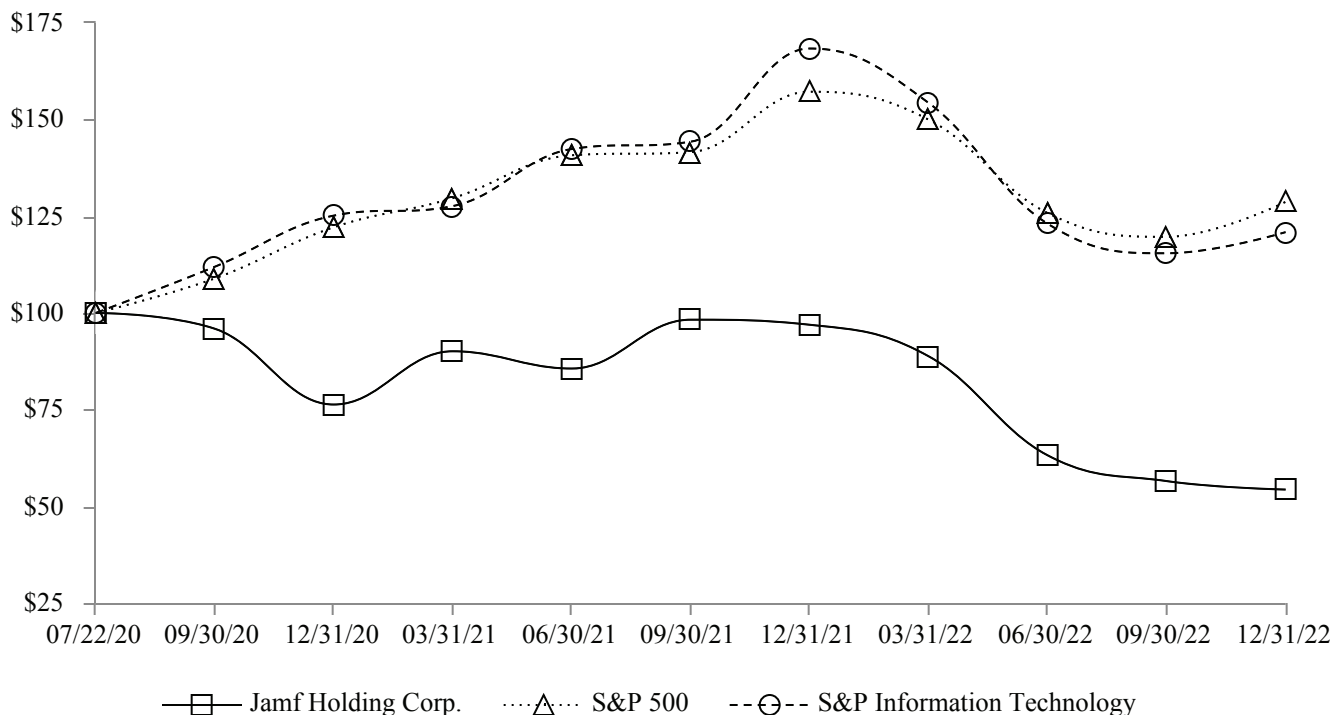
Stock Performance Graph

The following performance graph and related information shall not be deemed to be “soliciting material” or to be “filed” for purposes of Section 18 of the Exchange Act, and shall not be incorporated by reference into any document filed by us with the SEC under the Exchange Act or the Securities Act, whether made before or after the date of this Annual Report on Form 10-K, regardless of any general incorporation language in such filing, except as shall be expressly set forth by specific reference in such filing.

The following performance graph and related information shows a comparison of the cumulative total return for our common stock, the S&P 500 Index, and the S&P Information Technology Index between July 22, 2020 (the date our common stock commenced trading on NASDAQ) through December 31, 2022. All values assume an initial investment of \$100 and reinvestment of any dividends. The comparisons are based on historical data and are not indicative of, nor intended to forecast, the future performance of our common stock.

The closing price of our common stock on December 30, 2022, the last trading day of our 2022 fiscal year, was \$21.30.

**COMPARISON OF 29 MONTH CUMULATIVE TOTAL RETURN*
Among Jamf Holding Corp., the S&P 500 Index,
and the S&P Information Technology Index**



*\$100 invested on 7/22/20 in stock or 6/30/20 in index, including reinvestment of dividends.
Fiscal year ending December 31.

Unregistered Sales of Equity Securities

We issued an aggregate 711,111 shares of our common stock (for consideration of \$15.1 million based on the closing price of our common stock on November 16, 2022) to various persons and entities as partial consideration for our purchase of ZecOps. On the closing date (November 16, 2022), 710,691 shares of this consideration were issued to applicable ZecOps equityholders and 420 shares were issued in a reserve account, subject to the completion of customary shareholder certifications. The reserved shares were subsequently released in January 2023. The offer, sale, and issuance of these shares was deemed to be exempt from registration under the Securities Act in reliance on Rule 506 of Regulation D. The recipients of the

shares acquired them for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to these shares. The recipients were all accredited investors within the meaning of Rule 501 of Regulation D under the Securities Act and had adequate access to information about us. No underwriters or placement agents were involved in this transaction.

Issuer Purchases of Equity Securities

None.

Item 6. [Reserved]

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis summarizes the significant factors affecting the consolidated operating results, financial condition, liquidity, and cash flows of our company as of and for the periods presented below. The following discussion and analysis should be read in conjunction with our consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K. The discussion contains forward-looking statements that are based on the beliefs of management, as well as assumptions made by, and information currently available to, our management. Actual results could differ materially from those discussed in or implied by forward-looking statements as a result of various factors, including those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in the sections entitled “Risk Factors” and “Forward-Looking Statements.”

Overview

We are the standard in managing and securing Apple at work, and we are the only company in the world that provides a complete management and security solution for an Apple-first environment that is designed to be enterprise secure, consumer simple, and protective of personal privacy. We help IT and security teams confidently protect the devices, data, and applications used by their workforce, while providing employees with consumer-simple, privacy-protecting technology. With Jamf’s software, devices can be deployed to employees brand new in the shrink-wrapped box, set up automatically and personalized at first power-on and administered continuously throughout the lifecycle of the device.

Jamf was founded in 2002, around the same time that Apple was leading an industry transformation. Apple transformed the way people access and utilize technology through its focus on creating a superior consumer experience. With the release of revolutionary products like the Mac, iPod, iPhone, and iPad, Apple built the world’s most valuable brand and became ubiquitous in everyday life.

We have built our company through a primary focus on being the leading solution for Apple in the enterprise because we believe that due to Apple’s broad range of devices, combined with the changing demographics of today’s workforce and their strong preference for Apple, that Apple will become the number one device ecosystem in the enterprise by the end of this decade. We believe that the enterprise management provider that is best at Apple will one day be the enterprise leader, and that Jamf is best positioned for that leadership. Through our long-standing relationship with Apple, we have accumulated significant Apple technical experience and expertise that give us the ability to fully and quickly leverage and extend the capabilities of Apple products, operating systems, and services. This expertise enables us to fully support new innovations and operating system releases the moment they are made available by Apple. This focus has allowed us to create a best-in-class user experience in the enterprise.

We sell our SaaS solutions via a subscription model, through a direct sales force, online, and indirectly via our channel partners, including Apple. Our multi-dimensional go-to-market model and cloud-deployed offering enable us to reach all organizations around the world, large and small, with our software solutions. As a result, we continue to see rapid growth and expansion of our customer base as Apple continues to gain momentum in the enterprise.

Key Factors Affecting Our Performance

Our historical financial performance has been, and we expect our financial performance in the future to be, driven by our ability to:

Attract new customers. Our ability to attract new customers is dependent upon a number of factors, including the effectiveness of our pricing and solutions, the features and pricing of our competitors’ offerings, the effectiveness of our marketing efforts, the effectiveness of our channel partners in selling, marketing, and deploying our software solutions, and the growth of the market for devices and services for SMBs and enterprises. Sustaining our growth requires continued adoption of our platform by new customers. We intend to continue to invest in building brand awareness as we further penetrate our addressable markets. We intend to expand our customer base by continuing to make significant and targeted investments in our direct sales and marketing to attract new customers and to drive broader awareness of our software solutions.

Maintain customer retention and expand within our customer base. Our ability to increase revenue depends in large part on our ability to retain our existing customers and increase revenue from our existing customer base. Customer retention and expansion is dependent upon a number of factors, including their satisfaction with our software solutions and support, the features and pricing of our competitors’ offerings, and our ability to effectively enhance our platform by developing new products and features and addressing additional use cases. Often our customers will begin with a small deployment and then

later expand their usage more broadly within the enterprise as they realize the benefits of our platform. We believe that our “land and expand” business model allows us to efficiently increase revenue from our existing customer base. We intend to continue to invest in enhancing awareness of our software solutions, creating additional use cases, and developing more products, features, and functionality, which we believe are important factors to expand usage of our software solutions by our existing customer base. We believe our ability to retain and expand usage of our software solutions by our existing customer base is evidenced by our dollar-based net retention rate.

Sustain product innovation and technology leadership. Our success is dependent on our ability to sustain product innovation and technology leadership in order to maintain our competitive advantage. We believe that we have built a highly differentiated platform, and we intend to further extend the adoption of our platform through additional innovation. While sales of subscriptions to our Jamf Pro product account for most of our revenue, we intend to continue to invest in building additional products, features, and functionality that expand our capabilities and facilitate the extension of our platform to new use cases. Our future success is dependent on our ability to successfully develop, market, and sell additional products to both new and existing customers. For example, we announced our BYOD solution in March 2022 to help organizations manage and secure personally owned devices that employees bring to work, while upholding employee personal privacy.

Continue investment in growth. Our ability to effectively invest for growth is dependent upon a number of factors, including our ability to offset anticipated increases in operating expenses with revenue growth, our ability to spend our research and development budget efficiently or effectively on compelling innovation and technologies, our ability to accurately predict costs, and our ability to maintain our corporate culture as our headcount expands. We plan to continue investing in our business so we can capitalize on our market opportunity. We intend to grow our sales team to target expansion within our midmarket and enterprise customers and to attract new customers. We expect to continue to make focused investments in marketing to drive brand awareness and enhance the effectiveness of our customer acquisition model. We also intend to continue to invest in our research and development team to develop new and improved products, features, and functionality. Although these investments may increase our operating expenses and, as a result, adversely affect our operating results in the near term, we believe they will contribute to our long-term growth.

Continue international expansion. Our international growth in any region will depend on our ability to effectively implement our business processes and go-to-market strategy, our ability to adapt to market or cultural differences, the general competitive landscape, our ability to invest in our sales and marketing channels, the maturity and growth trajectory of devices and services by region, and our brand awareness and perception. We plan to continue making investments in our international sales and marketing channels to take advantage of this market opportunity while refining our go-to-market approach based on local market dynamics. While we believe global demand for our platform will increase as international market awareness of Jamf grows, our ability to conduct our operations internationally will require considerable management attention and resources and is subject to the particular challenges of supporting a growing business in an environment of multiple languages, cultures, customs, legal and regulatory systems (including with respect to data transfer and privacy), alternative dispute systems, commercial markets, and geopolitical challenges. In addition, global demand for our platform and the growth of our international operations is dependent upon the rate of market adoption of Apple products in international markets.

Enhance our offerings via our partner network. Our success is dependent not only on our independent efforts to innovate, scale, and reach more customers directly but also on the success of our partners to continue to gain share in the enterprise. With a focus on the user and being the bridge between critical technologies — with Apple and Microsoft as two examples — we feel we can help other market participants deliver more to enterprise users with the power of Jamf. We will continue to invest in the relationships with our existing, critical partners, nurture and develop new relationships and do so globally. We will continue to invest in developing “plus one” solutions and workflows that help tie our software solutions together with those delivered by others.

General and industry-specific economic and market conditions and reductions in IT spending. Our revenue, results of operations, and cash flows depend on the overall demand for our products. Currently, the U.S. and other key international economies are impacted by record levels of inflation, elevated interest rates, supply chain challenges, volatility in credit, equity and foreign exchange markets, and overall uncertainty with respect to the economy, including the possibility of a recession. These factors could result in reductions in IT spending by our existing and prospective customers or in requests to renegotiate existing contracts, defaults on payments due on existing contracts, or non-renewals. In the second half of 2022, as result of macroeconomic uncertainty, some of our customers took a more moderate outlook when planning their future hiring and device growth needs. We expect these conditions to continue in 2023.

Key Business Metrics

In addition to our GAAP financial information, we review several operating and financial metrics, including the following key metrics, to evaluate our business, measure our performance, identify trends affecting our business, formulate business plans, and make strategic decisions.

Number of Devices

We believe our ability to grow the number of devices on our software platform provides a key indicator of the growth of our business and our future business opportunities. We define a device at the end of any particular period as a device owned by a customer, which device has at least one Jamf product pursuant to an active subscription or support and maintenance agreement or that has a reasonable probability of renewal. We define a customer at the end of any particular period as an entity with at least one active subscription or support and maintenance agreement as of the measurement date or that has a reasonable probability of renewal. A single organization with separate subsidiaries, segments, or divisions that use our platform may represent multiple customers as we treat each entity, subsidiary, segment, or division that is invoiced separately as a single customer. In cases where customers subscribe to our platform through our channel partners, each end customer is counted separately. A single customer may have multiple Jamf products on a single device, but we still would only count that as one device.

The number of devices on our software platform was 30.0 million and 26.1 million as of December 31, 2022 and 2021, respectively, representing a 15% year-over-year growth rate. The increase in number of devices reflects our growth across industries, products, and geographies.

Annual Recurring Revenue

ARR represents the annualized value of all subscription and support and maintenance contracts as of the end of the period. ARR mitigates fluctuations due to seasonality, contract term, and the sales mix of subscriptions for term-based licenses and SaaS. In 2022, ARR is calculated on a constant currency basis using a rate that estimates the exchange rate at the beginning of the year. ARR does not have any standardized meaning and is therefore unlikely to be comparable to similarly titled measures presented by other companies. ARR should be viewed independently of revenue and deferred revenue and is not intended to be combined with or to replace either of those items. ARR is not a forecast and the active contracts at the end of a reporting period used in calculating ARR may or may not be extended or renewed by our customers.

Our ARR was \$512.5 million and \$412.5 million as of December 31, 2022 and 2021, respectively, which is an increase of 24% year-over-year. The growth in our ARR is primarily driven by device expansion, the addition of new customers, and cross-selling additional solutions to our installed customer base.

Dollar-Based Net Retention Rate

To further illustrate the “land and expand” economics of our customer relationships, we examine the rate at which our customers increase their subscriptions for our software solutions. Our dollar-based net retention rate measures our ability to increase revenue across our existing customer base through expanded use of our software solutions, offset by customers whose subscription contracts with us are not renewed or renew at a lower amount.

We calculate dollar-based net retention rate as of a period end by starting with Prior Period ARR. We then calculate the Current Period ARR. Current Period ARR includes any expansion and is net of contraction or attrition over the last 12 months but excludes ARR from new customers in the current period. We then divide the total Current Period ARR by the total Prior Period ARR to arrive at the dollar-based net retention rate.

Our dollar-based net retention rates were 113% and 120% for the trailing twelve months ended December 31, 2022 and 2021, respectively. Our dollar-based net retention rate for the trailing twelve months ended December 31, 2021 was based on our Jamf legacy business and did not include Wandera since it had not been a part of our business for the full trailing twelve months. Our high dollar-based net retention rates are primarily attributable to an expansion of devices and our ability to cross-sell our new solutions to our installed customer base.

Components of Results of Operations

Revenue

We recognize revenue under ASC 606 when or as performance obligations are satisfied. We derive revenue primarily from sales of SaaS subscriptions and support and maintenance contracts and, to a lesser extent, sales of on-premise term-based subscriptions and perpetual licenses and services.

Subscription. Subscription revenue consists of sales of SaaS subscriptions and on-premise term-based subscription licenses as well as support and maintenance contracts. We sell our software solutions primarily with a one-year contract term. We typically invoice SaaS subscription fees and support and maintenance fees annually in advance and recognize revenue ratably over the term of the applicable agreement, provided that all other revenue recognition criteria have been satisfied. The license portion of on-premise subscription revenue is recognized upfront, assuming all revenue recognition criteria are satisfied. See “Critical Accounting Estimates” for more information. Beginning in the third quarter of 2021, we updated how we deliver our Jamf Connect product resulting in a change in revenue recognition, with less revenue recognized upfront as on-premise subscription revenue. This revenue is now recognized ratably over the term of the subscription, in line with the majority of our revenue. We expect subscription revenue to increase over time as we expand our customer base because sales to new customers are expected to be primarily SaaS subscriptions.

License. License revenue consists of revenue from on-premise perpetual licenses of our Jamf Pro product sold primarily to existing customers. We recognize license revenue upfront, assuming all revenue recognition criteria are satisfied. We expect license revenue to decrease because sales to new customers are primarily cloud-based subscription arrangements and therefore reflected in subscription revenue.

Services. Services revenue consists primarily of professional services provided to our customers to configure and optimize the use of our software solutions, as well as training services related to the operation of our software solutions. Our services are priced on a fixed fee basis and generally invoiced in advance of the service being delivered. Revenue is recognized as the services are performed. We expect services revenue to decrease as a percentage of total revenue as the demand for our services is not expected to grow at the same rate as the demand for our subscription solutions.

Cost of Revenue

Cost of subscription. Cost of subscription revenue consists primarily of employee compensation costs for employees associated with supporting our subscription and support and maintenance arrangements, our customer success function, and third-party hosting fees related to our cloud services. Employee compensation and related costs include cash compensation and benefits to employees and associated overhead costs. We expect cost of subscription revenue to increase in absolute dollars, but to remain relatively consistent as a percentage of subscription revenue, relative to the extent of the growth of our business.

Cost of services. Cost of services revenue consists primarily of employee compensation costs directly associated with delivery of professional services and training, costs of third-party integrators, and other associated overhead costs.

Amortization. Amortization expense consists of amortization of acquired intangible assets.

Gross Profit

Gross profit, or revenue less cost of revenue, has been and will continue to be affected by various factors, including the mix of cloud-based subscription customers, the costs associated with supporting our cloud solution, the extent to which we expand our customer support team, and the extent to which we can increase the efficiency of our technology and infrastructure through technological improvements. We expect our gross profit to increase in absolute dollars.

Operating Expenses

Sales and Marketing. Sales and marketing expenses consist primarily of employee compensation costs, sales commissions, costs of general marketing and promotional activities, travel-related expenses, and allocated overhead. Sales commissions as well as associated payroll taxes and retirement plan contributions (together, contract costs) that are incremental to the acquisition of customer contracts are capitalized and amortized over the period of benefit, which is estimated to be generally five years. We expect our sales and marketing expenses to increase on an absolute dollar basis as we expand our sales personnel and marketing efforts.

Research and development. Research and development expenses consist primarily of personnel costs and allocated overhead. We will continue to invest in innovation so that we can offer our customers new solutions and enhance our existing solutions. See “Business — Research and Development” for more information. We expect such investment to increase on an absolute dollar basis as our business grows.

General and Administrative. General and administrative expenses consist primarily of employee compensation costs for corporate personnel, such as those in our executive, human resource, facilities, accounting and finance, legal and compliance, and IT departments. In addition, general and administrative expenses include acquisition and integration-related expenses which primarily consist of third-party expenses, such as legal and accounting fees, and adjustments to contingent consideration. General and administrative expenses also include costs incurred in secondary offerings. We expect our general and administrative expenses to increase on a dollar basis as our business grows, particularly as we continue to invest in technology infrastructure and expand our operations globally. Also, we incur additional general and administrative expenses as a result of operating as a public company, including costs to comply with the rules and regulations applicable to companies listed on a national securities exchange, costs related to compliance and reporting obligations pursuant to the rules and regulations of the SEC, and increased expenses for insurance, investor relations, and accounting expenses.

Amortization. Amortization expense consists of amortization of acquired intangible assets.

Interest Expense, Net

Interest expense, net primarily consists of interest charges and amortization of capitalized issuance costs related to our 2026 Notes, as well as interest income earned on our cash and cash equivalents.

Loss on Extinguishment of Debt

Upon closing of the IPO, we repaid \$205.0 million of the principal amount of the 2017 Term Loan Facility and recorded a loss on extinguishment of debt of \$5.2 million for the prepayment penalty and write off of debt issuance costs. In the third quarter of 2021, we repaid the principal amount of the 2021 Term Loan Facility and recorded debt extinguishment costs of \$0.4 million for the write-off of remaining debt issuance costs.

Foreign Currency Transaction Gain (Loss)

Foreign currency transaction gain (loss) includes gains and losses from transactions denominated in a currency other than the Company’s functional currency, the U.S. dollar.

Income Tax (Provision) Benefit

Income tax (provision) benefit consists primarily of income taxes related to U.S. federal and state income taxes and income taxes in foreign jurisdictions in which we conduct business.

Results of Operations

The following table sets forth our consolidated statements of operations data for the periods indicated:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Revenue:			
Subscription	\$ 455,007	\$ 344,243	\$ 248,879
Services	19,025	16,122	14,519
License	4,744	6,023	5,734
Total revenue	<u>478,776</u>	<u>366,388</u>	<u>269,132</u>
Cost of revenue:			
Cost of subscription ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾ (exclusive of amortization expense shown below)	85,479	63,441	39,529
Cost of services ⁽¹⁾⁽²⁾⁽³⁾ (exclusive of amortization expense shown below)	13,816	10,898	10,726
Amortization expense	19,932	16,018	10,753
Total cost of revenue	<u>119,227</u>	<u>90,357</u>	<u>61,008</u>
Gross profit	359,549	276,031	208,124
Operating expenses:			
Sales and marketing ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾	217,728	148,192	98,885
Research and development ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾	119,906	82,541	52,513
General and administrative ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾	132,562	96,206	51,603
Amortization expense	28,227	25,294	22,575
Total operating expenses	<u>498,423</u>	<u>352,233</u>	<u>225,576</u>
Loss from operations	(138,874)	(76,202)	(17,452)
Interest expense, net	(538)	(2,478)	(10,741)
Loss on extinguishment of debt	—	(449)	(5,213)
Foreign currency transaction loss	(2,802)	(849)	(722)
Other income, net	—	—	91
Loss before income tax benefit	<u>(142,214)</u>	<u>(79,978)</u>	<u>(34,037)</u>
Income tax benefit	913	4,789	9,955
Net loss	<u>\$ (141,301)</u>	<u>\$ (75,189)</u>	<u>\$ (24,082)</u>

⁽¹⁾ Includes stock-based compensation as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Cost of revenue:			
Subscription	\$ 8,854	\$ 3,755	\$ 732
Services	1,299	594	139
Sales and marketing	33,559	10,938	1,748
Research and development	24,392	10,512	1,533
General and administrative	41,066	10,006	2,591
	<u>\$ 109,170</u>	<u>\$ 35,805</u>	<u>\$ 6,743</u>

(2) Includes payroll taxes related to stock-based compensation as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Cost of revenue:			
Subscription	\$ 293	\$ 122	\$ —
Services	54	24	—
Sales and marketing	810	431	—
Research and development	429	335	—
General and administrative	428	615	—
	<u>\$ 2,014</u>	<u>\$ 1,527</u>	<u>\$ —</u>

(3) Includes depreciation expense as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Cost of revenue:			
Subscription	\$ 1,201	\$ 1,134	\$ 985
Services	170	169	207
Sales and marketing	2,725	2,342	1,966
Research and development	1,610	1,277	1,149
General and administrative	965	835	876
	<u>\$ 6,671</u>	<u>\$ 5,757</u>	<u>\$ 5,183</u>

(4) Includes acquisition-related expense as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Cost of revenue:			
Subscription	\$ 61	\$ 88	\$ —
Sales and marketing	7	180	—
Research and development	912	1,088	—
General and administrative	3,663	5,032	5,200
	<u>\$ 4,643</u>	<u>\$ 6,388</u>	<u>\$ 5,200</u>

General and administrative also includes acquisition-related earnout of \$0.7 million, \$6.0 million, and \$(1.0) million for the years ended December 31, 2022, 2021, and 2020, respectively. The acquisition-related earnout was an expense for the years ended December 31, 2022 and 2021 compared to a benefit for the year ended December 31, 2020 reflecting the increase in fair value of the Digita acquisition contingent liability due to growth in sales of our Jamf Protect product. General and administrative also includes the full settlement of a \$5.0 million legal-related matter for the year ended December 31, 2021.

The following table sets forth our consolidated statements of operations data expressed as a percentage of total revenue for the periods indicated:

	Years Ended December 31,		
	2022	2021	2020
	(as a percentage of total revenue)		
Revenue:			
Subscription	95 %	94 %	93 %
Services	4	4	5
License	1	2	2
Total revenue	100	100	100
Cost of revenue:			
Cost of subscription (exclusive of amortization expense shown below)	18	17	15
Cost of services (exclusive of amortization expense shown below)	3	3	4
Amortization expense	4	5	4
Total cost of revenue	25	25	23
Gross profit	75	75	77
Operating expenses:			
Sales and marketing	45	40	37
Research and development	25	23	20
General and administrative	28	26	19
Amortization expense	6	7	8
Total operating expenses	104	96	84
Loss from operations	(29)	(21)	(6)
Interest expense, net	—	(1)	(4)
Loss on extinguishment of debt	—	—	(2)
Foreign currency transaction loss	(1)	—	—
Other income, net	—	—	—
Loss before income tax benefit	(30)	(22)	(12)
Income tax benefit	—	1	4
Net loss	(30)%	(21)%	(8)%

A discussion regarding our results of operations for the year ended December 31, 2022 compared to the year ended December 31, 2021 is presented below. A discussion regarding our results of operations for the year ended December 31, 2021 compared to the year ended December 31, 2020 can be found under Part II, Item 7 in our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on March 1, 2022, which is available free of charge on the SEC's website at www.sec.gov and our investor relations website at ir.jamf.com.

Comparison of the Years Ended December 31, 2022 and 2021

Revenue

	Years Ended December 31,		Change	
	2022	2021	\$	%
	(in thousands, except percentages)			
SaaS subscription and support and maintenance	\$ 430,613	\$ 313,950	\$ 116,663	37 %
On-premise subscription	24,394	30,293	(5,899)	(19)
Subscription revenue	455,007	344,243	110,764	32
Professional services	19,025	16,122	2,903	18
Perpetual licenses	4,744	6,023	(1,279)	(21)
Non-subscription revenue	23,769	22,145	1,624	7
Total revenue	\$ 478,776	\$ 366,388	\$ 112,388	31 %

Total revenue increased by \$112.4 million, or 31%, for the year ended December 31, 2022 compared to the year ended December 31, 2021. Overall revenue increased primarily as a result of higher subscription revenue. Subscription revenue accounted for 95% of total revenue for the year ended December 31, 2022 compared to 94% for the year ended December 31, 2021. The increase in subscription revenue was driven by device expansion, the addition of new customers, and cross-selling, as well as the contribution of revenue from Wandera, partially offset by the impact from a change in revenue recognition related to our Jamf Connect product resulting from updates to how we deliver the product.

Cost of Revenue and Gross Margin

	Years Ended December 31,		Change	
	2022	2021	\$	%
	(in thousands, except percentages)			
Cost of revenue:				
Cost of subscription (exclusive of amortization expense shown below)	\$ 85,479	\$ 63,441	\$ 22,038	35 %
Cost of services (exclusive of amortization expense show below)	13,816	10,898	2,918	27
Amortization expense	19,932	16,018	3,914	24
Total cost of revenue	<u>\$ 119,227</u>	<u>\$ 90,357</u>	<u>\$ 28,870</u>	32 %
Gross margin	75%	75%		

Cost of revenue increased by \$28.9 million, or 32%, for the year ended December 31, 2022 compared to the year ended December 31, 2021 driven by an increase in cost of subscription revenue and amortization expense. Cost of subscription revenue increased by \$22.0 million, or 35%, primarily due to a \$9.0 million increase in employee compensation costs related to higher headcount to support the growth in our subscription customer base and the Wandera acquisition, a \$6.9 million increase in third party hosting fees as we increased capacity to support our growth and the Wandera acquisition, and a \$5.3 million increase in stock-based compensation expense and related payroll taxes. Cost of services revenue increased by \$2.9 million, or 27%, due to higher employee compensation costs and stock-based compensation expense. Amortization expense increased by \$3.9 million, or 24%, primarily reflecting the increase in intangible assets due to the Wandera acquisition.

Total gross margin was 75% for both the years ended December 31, 2022 and 2021.

Operating Expenses

	Years Ended December 31,		Change	
	2022	2021	\$	%
	(in thousands, except percentages)			
Operating expenses:				
Sales and marketing	\$ 217,728	\$ 148,192	\$ 69,536	47 %
Research and development	119,906	82,541	37,365	45
General and administrative	132,562	96,206	36,356	38
Amortization expense	28,227	25,294	2,933	12
Operating expenses	<u>\$ 498,423</u>	<u>\$ 352,233</u>	<u>\$ 146,190</u>	42 %

Sales and Marketing. Sales and marketing expenses increased by \$69.5 million, or 47%, for the year ended December 31, 2022 compared to the year ended December 31, 2021 primarily due to a \$31.8 million increase in employee compensation costs driven by higher headcount due to growth in the business and the Wandera acquisition, a \$23.0 million increase in stock-based compensation expense and related payroll taxes, a \$6.8 million increase in marketing costs, a \$4.2 million increase in travel-related expenses, and a \$2.3 million increase in computer hardware and software costs to support the growth of the business. Marketing costs increased primarily due to increases in demand generation programs, advertising, and brand awareness campaigns focused on new customer acquisition. The increase in stock-based compensation expense was primarily due to \$7.4 million of expense related to return target options and an increase in expense related to RSU awards.

See “— Critical Accounting Estimates — Stock Based Compensation” and “Note 2 — Summary of significant accounting policies” to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for more information regarding the modification of the return target options.

Research and Development. Research and development expenses increased by \$37.4 million, or 45%, for the year ended December 31, 2022 compared to the year ended December 31, 2021 primarily due to a \$20.3 million increase in employee compensation costs driven by higher headcount due to growth in our overall business and the Wandera acquisition, a \$14.0 million increase in stock-based compensation expense and related payroll taxes, and a \$2.0 million increase in computer hardware and software costs to support the growth of the business. The increase in stock-based compensation expense was primarily due to \$5.7 million of expense related to return target options and an increase in expense related to RSU awards.

General and Administrative. General and administrative expenses increased by \$36.4 million, or 38%, for the year ended December 31, 2022 compared to the year ended December 31, 2021. The increase was primarily due to a \$12.6 million increase in employee compensation costs driven by higher headcount to support our continued growth and the Wandera acquisition, a \$30.9 million increase in stock-based compensation expense and related payroll taxes, a \$2.4 million increase in outside services, and a \$2.1 million increase in computer hardware and software costs to support the growth of the business, partially offset by a \$5.3 million decrease in acquisition-related earnout, a \$5.0 million decrease in legal reserve, a \$1.3 million decrease in acquisition-related costs, and a \$0.5 million decrease in offering costs. The increase in stock-based compensation expense was primarily due to \$19.9 million of expense related to return target options and an increase in expense related to RSU awards.

Amortization Expense. Amortization expense increased by \$2.9 million, or 12%, for the year ended December 31, 2022 compared to the year ended December 31, 2021 primarily reflecting the increase in intangible assets due to the Wandera acquisition.

Interest Expense, Net

	Years Ended December 31,		Change	
	2022	2021	\$	%
	(in thousands, except percentages)			
Interest expense, net	\$ 538	\$ 2,478	\$ (1,940)	(78)%

Interest expense, net decreased by \$1.9 million, or 78%, for the year ended December 31, 2022 compared to the year ended December 31, 2021 reflecting a \$3.0 million increase in interest income due to higher earned interest rates and higher average invested balances and a \$0.5 million decrease in interest charges, partially offset by a \$1.5 million increase in amortization of issuance costs driven by the issuance of the 2026 Notes.

Loss on Extinguishment of Debt

	Years Ended December 31,		Change	
	2022	2021	\$	%
	(in thousands, except percentages)			
Loss on extinguishment of debt	\$ —	\$ 449	\$ (449)	(100)%

Loss on extinguishment of debt of \$0.4 million for the year ended December 31, 2021 consists of the write off of debt issuance costs upon the early repayment of the 2021 Term Loan Facility.

Foreign Currency Transaction Loss

	Years Ended December 31,		Change	
	2022	2021	\$	%
	(in thousands, except percentages)			
Foreign currency transaction loss	\$ 2,802	\$ 849	\$ 1,953	NM

NM Not Meaningful.

Foreign currency transaction loss increased by \$2.0 million for the year ended December 31, 2022 compared to the year ended December 31, 2021 primarily due to the impact of changes in foreign currency exchange rates, primarily the GBP and EUR.

Income Tax Benefit

	Years Ended December 31,		Change	
	2022	2021	\$	%
	(in thousands, except percentages)			
Income tax benefit	\$ 913	\$ 4,789	\$ (3,876)	(81)%

Income tax benefit was \$0.9 million and \$4.8 million for the years ended December 31, 2022 and 2021, respectively. The effective tax rates for the years ended December 31, 2022 and 2021 were 0.6% and 6.0%, respectively. The effective tax rate for the year ended December 31, 2022 was lower than the prior year period primarily due to valuation allowances. The effective tax rates for the years ended December 31, 2022 and 2021 were impacted by \$0.7 million and \$1.7 million, respectively, of discrete income tax benefit.

Non-GAAP Financial Measures

In addition to our results determined in accordance with GAAP, we believe the following non-GAAP financial measures are useful in evaluating our operating performance. We believe that non-GAAP financial measures, when taken collectively with GAAP financial measures, may be helpful to investors because they provide consistency and comparability with our past financial performance (for example, by eliminating items that fluctuate for reasons unrelated to operating performance or that represent non-recurring, one-time events), provide additional understanding of factors and trends affecting our business, and assist in comparisons with other companies, some of which use similar non-GAAP information to supplement their GAAP results.

Our non-GAAP financial measures are presented for supplemental informational purposes only, and should not be considered a substitute for financial measures presented in accordance with GAAP. The principal limitation of these non-GAAP financial measures is that they exclude certain expenses that are required by GAAP to be recorded in our financial statements, including stock-based compensation expense and amortization of acquired intangible assets. In addition, they are subject to inherent limitations as they reflect the exercise of judgment by our management about which expenses are excluded or included in determining these non-GAAP financial measures. Further, non-GAAP financial measures are not standardized. It may not be possible to compare these financial measures with other companies' non-GAAP financial measures having the same or similar names. While the amortization expense of acquired intangible assets is excluded from certain non-GAAP measures, the revenue related to acquired intangible assets is reflected in such measures as those assets contribute to revenue generation. A reconciliation is provided below for each non-GAAP financial measure to the most directly comparable financial measure stated in accordance with GAAP. Investors are encouraged to review the related GAAP financial measures and the reconciliation of these non-GAAP financial measures to their most directly comparable GAAP financial measures. In addition, investors are encouraged to review our consolidated financial statements and the notes thereto in their entirety and not to rely on any single financial measure.

Non-GAAP Gross Profit and Non-GAAP Gross Profit Margin

We use non-GAAP gross profit and non-GAAP gross profit margin, and believe it is useful to our investors, to understand and evaluate our operating performance and trends and to prepare and approve our annual budget. We define non-GAAP gross profit as gross profit, adjusted for amortization expense, stock-based compensation expense, acquisition-related expense, and payroll taxes related to stock-based compensation. We define non-GAAP gross profit margin as non-GAAP gross profit as a percentage of total revenue.

A reconciliation of non-GAAP gross profit to gross profit and non-GAAP gross profit margin to gross profit margin, the most directly comparable GAAP measures, are as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Gross profit	\$ 359,549	\$ 276,031	\$ 208,124
Amortization expense	19,932	16,018	10,753
Stock-based compensation	10,153	4,349	871
Acquisition-related expense	61	88	—
Payroll taxes related to stock-based compensation	347	146	—
Non-GAAP gross profit	<u>\$ 390,042</u>	<u>\$ 296,632</u>	<u>\$ 219,748</u>
Gross profit margin	75%	75%	77%
Non-GAAP gross profit margin	81%	81%	82%

Non-GAAP Operating Income and Non-GAAP Operating Income Margin

We use non-GAAP operating income and non-GAAP operating income margin, and believe it is useful for our investors, to understand and evaluate our operating performance and trends, to prepare and approve our annual budget, and to develop short-term and long-term operating plans. We define non-GAAP operating income as operating loss, adjusted for amortization expense, stock-based compensation expense, acquisition-related expense, acquisition-related earnout, costs associated with our secondary offerings, payroll taxes related to stock-based compensation, and legal settlement. We define non-GAAP operating income margin as non-GAAP operating income as a percentage of total revenue.

A reconciliation of non-GAAP operating income to operating loss and non-GAAP operating income margin to operating loss margin, the most directly comparable GAAP measures, are as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Operating loss	\$ (138,874)	\$ (76,202)	\$ (17,452)
Amortization expense	48,159	41,312	33,328
Stock-based compensation	109,170	35,805	6,743
Acquisition-related expense	4,643	6,388	5,200
Acquisition-related earnout	694	6,037	(1,000)
Offering costs	124	594	670
Payroll taxes related to stock-based compensation	2,014	1,527	—
Legal settlement	—	5,000	—
Non-GAAP operating income	<u>\$ 25,930</u>	<u>\$ 20,461</u>	<u>\$ 27,489</u>
Operating loss margin	(29)%	(21)%	(6)%
Non-GAAP operating income margin	5%	6%	10%

Non-GAAP Net Income

We use non-GAAP net income, and believe it is useful for our investors, to understand and evaluate our operating performance and trends. We define non-GAAP net income as net loss, adjusted for income tax benefit, amortization expense, stock-based compensation expense, foreign currency transaction loss, loss on extinguishment of debt, amortization of debt issuance costs, acquisition-related expense, acquisition-related earnout, costs associated with our secondary offerings, payroll taxes related to stock-based compensation, and legal settlement, and adjustment to income tax expense based on the non-GAAP measure of profitability using our blended U.S. statutory tax rate.

We define non-GAAP income before income taxes as loss before income taxes adjusted for amortization expense, stock-based compensation expense, foreign currency transaction loss, loss on extinguishment of debt, amortization of debt

issuance costs, acquisition-related expense, acquisition-related earnout, costs associated with our secondary offerings, payroll taxes related to stock-based compensation, and legal settlement.

We define non-GAAP provision for income taxes as the current and deferred income tax expense commensurate with the non-GAAP measure of profitability using our blended U.S. statutory tax rate.

A reconciliation of non-GAAP net income to net loss, the most directly comparable GAAP measure, is as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Net loss	\$ (141,301)	\$ (75,189)	\$ (24,082)
Exclude: income tax benefit	913	4,789	9,955
Loss before income tax benefit	(142,214)	(79,978)	(34,037)
Amortization expense	48,159	41,312	33,328
Stock-based compensation	109,170	35,805	6,743
Foreign currency transaction loss	2,802	849	722
Loss on extinguishment of debt	—	449	5,213
Amortization of debt issuance costs	2,722	1,002	—
Acquisition-related expense	4,643	6,388	5,200
Acquisition-related earnout	694	6,037	(1,000)
Offering costs	124	594	670
Payroll taxes related to stock-based compensation	2,014	1,527	—
Legal settlement	—	5,000	—
Non-GAAP income before income taxes	28,114	18,985	16,839
Non-GAAP provision for income taxes ⁽¹⁾	(6,747)	(4,556)	(4,041)
Non-GAAP net income	<u>\$ 21,367</u>	<u>\$ 14,429</u>	<u>\$ 12,798</u>

⁽¹⁾ Beginning in the first quarter of 2022, the Company changed its method of calculating its non-GAAP provision for income taxes in accordance with the SEC's Non-GAAP Financial Measures Compliance and Disclosure Interpretation on a retroactive basis. Under the new method, the Company's blended U.S. statutory rate of 24% is used as an estimate for the current and deferred income tax expense associated with our non-GAAP income before income taxes. Historically, the Company had approximated the effective tax rate by taking into account the sizeable U.S. NOL carryforwards and tax credit carryforwards that have not been recorded where the Company does not expect to record or pay tax for the foreseeable future.

Adjusted EBITDA

We define adjusted EBITDA as net loss, adjusted for interest expense, net, provision (benefit) for income taxes, depreciation and amortization expense, stock-based compensation expense, foreign currency transaction loss, loss on extinguishment of debt, acquisition-related expense, acquisition-related earnout, costs associated with our secondary offerings, payroll taxes related to stock-based compensation, and legal settlement.

A reconciliation of adjusted EBITDA to net loss, the most directly comparable GAAP measure, is as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Net loss	\$ (141,301)	\$ (75,189)	\$ (24,082)
Interest expense, net	538	2,478	10,741
Benefit for income taxes	(913)	(4,789)	(9,955)
Depreciation expense	6,671	5,757	5,183
Amortization expense	48,159	41,312	33,328
Stock-based compensation	109,170	35,805	6,743
Foreign currency transaction loss	2,802	849	722
Loss on extinguishment of debt	—	449	5,213
Acquisition-related expense	4,643	6,388	5,200
Acquisition-related earnout	694	6,037	(1,000)
Offering costs	124	594	670
Payroll taxes related to stock-based compensation	2,014	1,527	—
Legal settlement	—	5,000	—
Adjusted EBITDA	<u>\$ 32,601</u>	<u>\$ 26,218</u>	<u>\$ 32,763</u>

Liquidity and Capital Resources

General

As of December 31, 2022, our principal sources of liquidity were cash and cash equivalents totaling \$224.3 million, which were held for general corporate purposes, which may include working capital, capital expenditures, and potential acquisitions and strategic transactions, as well as the available balance of the 2020 Revolving Credit Facility, described in Note 9 to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K. Our cash and cash equivalents are comprised of cash, money market deposit accounts, and money market funds with original maturities at the time of purchase of three months or less. We expect that our operating cash flows, in addition to our cash and cash equivalents, will enable us to make continued investments in supporting the growth of our business in the future.

We are a holding company, and we derive all of our operating income from our subsidiaries. As a result, our cash flow is dependent on the performance of our subsidiaries and the ability of those entities to distribute funds to us. See Item 5, “Market for Registrant’s Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities — Dividend Policy” for a discussion of our dividend policy, including restrictions on our ability to pay dividends and distributions.

A majority of our customers pay in advance for subscriptions and support and maintenance contracts, a portion of which is recorded as deferred revenue. Deferred revenue consists of the unearned portion of billed fees for our subscriptions, which is later recognized as revenue in accordance with our revenue recognition policy. As of December 31, 2022, we had deferred revenue of \$346.2 million, of which \$278.0 million was recorded as a current liability and is expected to be recorded as revenue in the next 12 months, provided all other revenue recognition criteria have been met.

On July 1, 2021, we completed our acquisition of Wandera for total consideration of \$409.3 million. The total consideration consisted of an initial payment of \$359.3 million at close and deferred consideration of \$50.0 million that was paid in \$25.0 million increments on October 1, 2021 and December 15, 2021. We initially financed the acquisition with cash on hand and proceeds from the Company’s \$250.0 million 2021 Term Loan Facility. On July 1, 2021, we entered into the Credit Agreement Amendment, which amended our 2020 Credit Agreement. The Credit Agreement Amendment provided for the 2021 Term Loan Facility, a new 364-day term loan facility in an aggregate principal amount of \$250.0 million on substantially the same terms and conditions as our existing 2020 Credit Agreement. The Company repaid the principal amount of the 2021 Term Loan Facility on September 23, 2021 with proceeds from the issuance and sale of the 2026 Notes. As of December 31, 2022, there were no amounts outstanding under the 2020 Credit Agreement, other than \$1.0 million in outstanding letters of credit.

On September 17, 2021, we completed a private offering of the 2026 Notes and received net proceeds of approximately \$361.4 million after deducting the initial purchasers' discounts and commissions and the offering expenses paid by us. The 2026 Notes bear interest at a rate of 0.125% per year, payable semiannually in arrears on March 1st and September 1st of each year, beginning on March 1, 2022. We used (i) approximately \$250.0 million of the net proceeds from the offering of the 2026 Notes to repay the Company's 2021 Term Loan Facility and to pay any associated prepayment penalties and accrued and unpaid interest to the date of repayment and (ii) approximately \$36.0 million of the net proceeds from the offering of the 2026 Notes to fund the cost of entering into privately negotiated capped call transactions, and will use the remainder of the net proceeds for general corporate purposes, which may include working capital, capital expenditures, and potential acquisitions and strategic transactions.

Future Liquidity and Capital Resource Requirements

We believe our cash and cash equivalents, the 2020 Revolving Credit Facility, and cash provided by sales of our software solutions and services will be sufficient to meet our working capital and capital expenditure needs, debt service requirements for at least the next 12 months, and other known long-term cash requirements. Our future capital requirements will depend on many factors including our growth rate, the timing and extent of spending to support development efforts, the expansion of sales and marketing activities, the introduction of new and enhanced products and services offerings, and the continuing market acceptance of our products. In the future, we may use cash to acquire or invest in complementary businesses, services, and technologies, including intellectual property rights.

Our principal commitments consist of obligations under our 2026 Notes, contractual agreements for hosting services and other support software, and operating leases for office space. Our obligations under our 2026 Notes are discussed above, as well as in "Note 9 — Debt" to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K. As of December 31, 2022, future interest payments on our 2026 Notes are \$0.5 million for 2023 and a total of \$1.4 million for 2024 through 2026. As of December 31, 2022, we have a total of \$45.2 million of purchase and lease commitments due in 2023 and a total of \$70.7 million of purchase and lease commitments due in 2024 through 2027. We also have a variable purchase obligation of \$17.5 million over the term of a three-year contract for third-party hosting services. See "Note 7 — Leases" and "Note 8 — Commitments and contingencies" to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for further information on our purchase and lease commitments.

Cash Flows

The following table presents a summary of our consolidated cash flows from operating, investing, and financing activities:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Net cash provided by operating activities	\$ 90,005	\$ 65,165	\$ 52,801
Net cash used in investing activities	(34,782)	(387,418)	(6,876)
Net cash provided by financing activities	261	305,528	115,964
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(713)	(993)	604
Net increase (decrease) in cash, cash equivalents, and restricted cash	54,771	(17,718)	162,493
Cash, cash equivalents, and restricted cash, beginning of period	177,150	194,868	32,375
Cash, cash equivalents, and restricted cash, end of period	<u>\$ 231,921</u>	<u>\$ 177,150</u>	<u>\$ 194,868</u>
Cash paid for interest	\$ 763	\$ 967	\$ 12,649
Cash paid for purchases of equipment and leasehold improvements	7,727	9,755	4,368

Operating Activities

Our largest source of operating cash is cash collections from our subscription customers. Our primary use of cash from operating activities is related to employee-related expenditures, marketing expenses, and third-party hosting costs.

For the year ended December 31, 2022, net cash provided by operating activities was \$90.0 million reflecting our net loss of \$141.3 million, adjusted for non-cash charges of \$190.6 million and net cash inflows of \$40.8 million from changes in our operating assets and liabilities. Non-cash charges primarily consisted of share-based compensation, depreciation and amortization of property and equipment and intangible assets, amortization of deferred contract costs, and non-cash lease

expense. The primary drivers of net cash inflows from changes in operating assets and liabilities included an increase of \$63.4 million in deferred revenue due to growth in subscription revenues and an increase of \$15.9 million in accounts payable and accrued liabilities. These changes were partially offset by an increase of \$31.1 million in deferred contract costs due to an increase in capitalized costs and an increase of \$9.5 million in trade accounts receivable due to higher sales and the timing of cash receipts from our customers.

For the year ended December 31, 2021, net cash provided by operating activities was \$65.2 million reflecting our net loss of \$75.2 million, adjusted for non-cash charges of \$104.0 million and net cash inflows of \$36.4 million from changes in our operating assets and liabilities. Non-cash charges primarily consisted of depreciation and amortization of property and equipment and intangible assets, share-based compensation, amortization of deferred contract costs, non-cash lease expense, and a \$6.0 million adjustment to contingent consideration, partially offset by deferred taxes. The primary drivers of net cash inflows from changes in operating assets and liabilities included an increase of \$71.2 million in deferred revenue due to growth in subscription revenues and an increase of \$6.4 million in accounts payable and accrued liabilities due to growth of the business. These changes were partially offset by an increase of \$24.8 million in deferred contract costs due to an increase in capitalized costs, an increase of \$9.3 million in prepaid expenses and other assets, and an increase of \$6.5 million in trade accounts receivable.

Investing Activities

During the year ended December 31, 2022, net cash used in investing activities was \$34.8 million primarily driven by the acquisition of ZecOps for \$19.8 million, net of the cash acquired, purchases of \$7.7 million in equipment and leasehold improvements, cash paid for two other acquisitions of \$4.0 million, and cash paid for the purchase of investments of \$3.1 million.

During the year ended December 31, 2021, net cash used in investing activities was \$387.4 million primarily driven by the acquisition of Wandera for \$349.7 million, net of cash acquired, \$25.0 million paid for the deferred consideration associated with the Wandera acquisition, and purchases of \$9.8 million in equipment and leasehold improvements for updates to office space and hardware and software.

Financing Activities

Net cash provided by financing activities of \$0.3 million during the year ended December 31, 2022 was primarily due to proceeds of \$5.2 million from the exercise of stock options, partially offset by \$4.6 million paid for contingent consideration associated with the Digita acquisition.

Net cash provided by financing activities of \$305.5 million during the year ended December 31, 2021 was primarily due to proceeds of \$373.8 million from the issuance and sale of the 2026 Notes and proceeds of \$10.7 million from the exercise of stock options, partially offset by \$36.0 million paid for the purchase of the Capped Calls, \$25.0 million paid for the deferred consideration associated with the Wandera acquisition, \$13.1 million paid for debt issuance costs, and \$4.2 million paid for the contingent consideration associated with the Digita acquisition.

Indemnification Agreements

In the ordinary course of business, we enter into agreements of varying scope and terms pursuant to which we agree to indemnify customers, channel partners, vendors, lessors, business partners, and other parties with respect to certain matters, including, but not limited to, losses arising out of the breach of such agreements, services to be provided by us, or from intellectual property infringement, misappropriation, or other violation claims made by third parties. See “Risk Factors — We have indemnity provisions under our contracts with our customers, channel partners, and other third parties, which could have a material adverse effect on our business.” In addition, we have entered into indemnification agreements with our directors and certain officers that will require us, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors, officers, or employees. No demands have been made upon us to provide indemnification under such agreements, and there are no claims that we are aware of that could have a material effect on our consolidated balance sheets, consolidated statements of operations and comprehensive loss, or consolidated statements of cash flows.

Critical Accounting Estimates

Our discussion and analysis of financial condition and results of operations are based upon our consolidated financial statements. The preparation of our financial statements in accordance with GAAP requires us to make estimates and

assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses. We base our estimates on experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. Actual results may differ from those estimates, impacting our reported results of operations and financial condition.

Our critical accounting policies are those that materially affect our consolidated financial statements and involve difficult, subjective, or complex judgments by management. A thorough understanding of these critical accounting policies is essential when reviewing our consolidated financial statements. We believe that the critical accounting policies listed below are the most difficult management decisions as they involve the use of significant estimates and assumptions as described above. Refer to “Note 2 — Summary of significant accounting policies” to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for more detailed information regarding our critical accounting policies.

Revenue recognition

We derive revenue from the sales of SaaS subscriptions, support and maintenance contracts, software licenses, and related professional services. We recognize revenue in accordance with ASC 606, which provides a five-step model for recognizing revenue from contracts with customers as follows:

- Identify the contract with a customer
- Identify the performance obligations in the contract
- Determine the transaction price
- Allocate the transaction price to the performance obligations in the contract
- Recognize revenue when or as performance obligations are satisfied

Our contracts with customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment.

When our contracts with customers contain multiple performance obligations, the contract transaction price is allocated based on a relative SSP basis to each performance obligation. The Company typically determines SSP based on observable selling prices of its products and services. In instances where SSP is not directly observable, such as with software licenses that are never sold on a stand-alone basis, SSP is determined using information that may include market conditions and other observable inputs. SSP is typically established as ranges and the Company typically has more than one SSP range for individual products and services due to the stratification of those products and services by customer class, channel type, and purchase quantity, among other circumstances. The SSP is reassessed periodically or when facts and circumstances change.

Deferred contract costs

Sales commissions, as well as associated payroll taxes and retirement plan contributions (together, contract costs), that are incremental to the acquisition of customer contracts are capitalized using a portfolio approach as deferred contract costs in the consolidated balance sheets when the period of benefit is determined to be greater than one year.

The Company has elected to apply the practical expedient to expense contract costs as incurred when the expected amortization period is one year or less. The judgments made in determining the amount of costs incurred include the portion of the commissions that are expensed in the current period versus the portion of the commissions that are recognized over the expected period of benefit, which often extends beyond the contract term as we generally do not pay commensurate commissions upon renewal of the service contracts. Contract costs are allocated to each performance obligation within the contract and amortized on a straight-line basis over the expected benefit period of the related performance obligations. We have determined that the expected period of benefit is generally five years based on evaluation of a number of factors, including customer attrition rates, weighted-average useful lives of our customer relationship and developed technology intangible assets, and market factors, including the overall competitive environment and technology life of competitors.

Stock-based compensation

The Company applies the provisions of ASC 718 in its accounting and reporting for stock-based compensation. In accordance with ASC 718, the Company recognizes compensation expense for all stock-based awards granted to our employees and non-employee directors in the consolidated statements of operations based on the estimated fair value of the awards on the date of grant. We use the Black-Scholes option pricing model to estimate the fair value of service-based options and purchase rights granted under the 2021 ESPP. We use the fair market value of our common stock on the date of grant to estimate the fair value of RSUs. We recognize compensation expense for service-based options and RSUs on a straight-line basis over the applicable vesting period. We recognize compensation expense for the purchase rights granted under the 2021 ESPP on a straight-line basis over the offering period. Forfeitures are accounted for as they occur.

The Company has also granted performance-based awards (also referred to as return target options) to certain executives. The Company uses a Modified Black-Scholes option pricing model, which uses Level 3 inputs for fair value measurement, to estimate the fair value. The contractual term of the awards is 10 years. As originally granted, the performance-based awards would vest and become exercisable when Vista's realized cash return on its investment in the Company equaled or exceeded \$1.515 billion upon the Termination Event. In conjunction with the IPO, the vesting conditions of the performance-based awards were modified to also vest following an IPO and registration and sale of shares by Vista provided that Vista achieved a cash return on its equity investment in the Company equaling or exceeding \$1.515 billion. In accordance with ASC 718, we calculated the fair value of these options on the modification date. The value of these options on the date of modification as of June 30, 2020 was \$33.0 million. As the awards were not considered probable of meeting the vesting requirements, no expense was recognized during the years ended December 31, 2021 and 2020. On June 24, 2022, the Company filed a Form S-3 "shelf" registration statement to facilitate future selling shareholder sales of common stock, including by Vista, and the achievement of the performance condition became probable, which resulted in the recognition of \$33.0 million of stock-based compensation expense. On June 27, 2022, the return target options outstanding were modified such that these options were deemed fully vested as of June 30, 2022. The fair value of the awards immediately before the modification was higher than the fair value immediately after the modification and therefore no incremental compensation cost was recognized.

Application of these approaches involves the use of estimates, judgment, and assumptions that are highly complex and subjective, including those regarding our future expected revenue, expenses, cash flows, discount rates, market multiples, the selection of comparable public companies, and the probability of future events.

Income taxes

Deferred tax assets and liabilities are recognized principally for the expected tax consequences of temporary differences between the tax basis of assets and liabilities and their reported amounts, using currently enacted tax rates. The measurement of a deferred tax asset is reduced, if necessary, by a valuation allowance if it is more likely than not that some portion or all of the deferred tax asset will not be realized. Significant judgment is required in evaluating the need for and magnitude of appropriate valuation allowances. The realization of our deferred tax assets is dependent on generating future taxable income and the reversal of existing temporary differences. Changes in tax laws and assumptions with respect to future taxable income could result in adjustment to these allowances.

The Company recognizes a tax benefit for uncertain tax positions only if the Company believes it is more likely than not that the position will be upheld on audit based solely on the technical merits of the tax position. The Company evaluates uncertain tax positions after the consideration of all available information.

Business combinations

When the Company acquires a business, the purchase price is allocated to the assets acquired and liabilities assumed based on their estimated fair values as of the date of acquisition. The allocation of the purchase price requires management to make significant estimates in determining the fair value of assets acquired and liabilities assumed, especially with respect to intangible assets. These estimates are inherently uncertain and unpredictable. During the measurement period, which may be up to one year from the acquisition date, adjustments to the fair value of the assets acquired and liabilities assumed may be recorded with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the fair value of the assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the consolidated statements of operations. Acquisition-related costs are expensed as incurred.

Goodwill

The Company evaluates goodwill for impairment in accordance with ASC 350, which requires goodwill to be either qualitatively or quantitatively assessed for impairment annually (or more frequently if impairment indicators arise) for each reporting unit. The Company has one reporting unit. The Company performs its impairment testing of goodwill at least annually and more frequently if events occur that would indicate that it is more likely than not the fair value of the reporting unit is less than the carrying value. If the Company's reporting unit carrying amount exceeds its fair value, an impairment charge will be recorded based on that difference. The impairment charge will be limited to the amount of goodwill currently recognized in the Company's single reporting unit. There is inherent subjectivity involved in estimating future cash flows, which can have a material impact on the amount of any potential impairment. Changes in estimates of future cash flows could result in a write-down of the asset in a future period. The Company elected to perform a quantitative assessment of goodwill as of October 1, 2022, and no impairment was identified. No other interim impairment tests were deemed necessary.

Other intangibles, net

Intangible assets with finite lives include trademarks, customer relationships, developed technology, non-competes, and order backlog. These assets are amortized over their estimated useful lives, which range from two to twelve years, on a straight-line basis. Intangible assets with finite lives are tested for impairment whenever events or circumstances indicate that the carrying amount of an asset (asset group) may not be recoverable. An impairment loss is recognized when the carrying amount of an asset exceeds the estimated undiscounted cash flows generated by the asset. The amount of the impairment loss recorded is calculated by the excess of the asset's carrying value over its fair value. There is inherent subjectivity involved in estimating future cash flows, which can have a material impact on the amount of any potential impairment. Changes in estimates of future cash flows could result in a write-down of the asset in a future period.

Recent Accounting Pronouncements

For a description of our recently adopted accounting pronouncements and recently issued accounting standards not yet adopted, see "Note 2 — Summary of significant accounting policies" to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of exposure due to potential changes in foreign currency exchange rates or interest rates.

Foreign Currency Exchange Risk

The functional currency of our foreign subsidiaries, except for Jamf Ltd. and its subsidiaries, is the U.S. dollar. The functional currency of Jamf Ltd. and its subsidiaries is the GBP. Most of our sales are denominated in U.S. dollars, and therefore our revenue is not currently subject to significant foreign currency risk. Our operating expenses are denominated in the currencies of the countries in which our operations are located, which are primarily in the U.S., UK, Czech Republic, Poland, and the Netherlands. Our consolidated results of operations and cash flows are, therefore, subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign currency exchange rates. To date, we have not entered into any hedging arrangements with respect to foreign currency risk or other derivative financial instruments. During the years ended December 31, 2022 and 2021, a hypothetical 10% change in foreign currency exchange rates applicable to our business would not have had a material impact on our consolidated results of operations and cash flows.

Interest Rate Risk

As of December 31, 2022, we had \$224.3 million of cash and cash equivalents, which were held for working capital purposes. Our cash and cash equivalents are comprised of cash, money market deposit accounts, and money market funds with original maturities at the time of purchase of three months or less. We do not enter into investments for trading or speculative purposes. Due to the short-term nature of these instruments, we believe that we do not have any material exposure to changes in the fair value of our investment portfolio as a result of changes in interest rates. Decreases in interest rates, however, would reduce future interest income.

In September 2021, the Company issued \$373.8 million aggregate principal amount of 0.125% 2026 Notes in a private offering. Because the 2026 Notes have a fixed interest rate, we do not have economic interest exposure on the 2026 Notes. The fair value of the 2026 Notes, however, fluctuates when interest rates fluctuate. Additionally, the fair value of the 2026 Notes fluctuates when the market price of our common stock fluctuates. The 2026 Notes are carried at face value less unamortized debt issuance costs on our consolidated balance sheets, and the fair value of the 2026 Notes is presented for disclosure purposes only.

Item 8. Financial Statements and Supplementary Data**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Jamf Holding Corp.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Jamf Holding Corp. (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations, comprehensive loss, and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated March 1, 2023 expressed an adverse opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the 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 audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Adoption of New Accounting Standards

ASU No. 2016-02

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for leases in 2021 due to the adoption of ASU No. 2016-02, Leases (Topic 842), as amended, effective January 1, 2021, using the optional transition method to the modified retrospective approach.

Critical Audit Matters

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

*Acquisition of ZecOps**Description of the Matter*

As discussed in Note 5 to the consolidated financial statements, during 2022, the Company completed its acquisition of ZecOps for total purchase consideration of \$44.3 million. The transaction was accounted for in accordance with the acquisition method of accounting for business combinations.

Auditing the Company's accounting for this business combination was complex due to the significant estimation required by management in determining the fair value of the acquired intangible assets, which principally consisted of developed technology. Management estimated the fair value of developed technology using the multi-period excess earnings method. The significant estimation uncertainty was primarily due to the judgmental nature of the inputs to the valuation model used to measure the fair value of this intangible asset, as well as the sensitivity of the respective fair value to the underlying significant assumptions. The significant assumptions used in the multi-period excess earnings method include revenue growth rates and obsolescence curve. These significant assumptions are considered highly subjective, as they are forward looking and could be affected by future economic and market conditions.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's process for accounting for acquired intangible assets. For example, we tested controls over management's review of the valuation of intangible assets, including the review of the valuation model and significant assumptions used in the valuation.

To test the estimated fair value of the acquired developed technology intangible asset, our audit procedures included, among others, reading the purchase agreement and assessing the completeness of identified intangible assets, evaluating the Company's use of valuation methodologies, evaluating the prospective financial information and testing the completeness and accuracy of the underlying data. We compared the significant assumptions, including prospective financial information, to the historical performance of the acquired entity and other comparable guideline companies within the same industry and considered the historical accuracy of management's estimates in other acquisitions. We also performed sensitivity analyses of the significant assumptions to evaluate the change in the fair value resulting from changes in the assumptions. We involved our valuation specialists to assist in the evaluation of the selection of the valuation models and testing certain significant assumptions used to value the acquired intangible asset.

*Allocating revenue in contracts with multiple performance obligations and determining the standalone selling price**Description of the Matter*

As described in Note 2 to the consolidated financial statements, the Company's contracts with customers often contain multiple performance obligations, which are accounted for separately if they are distinct. In such cases, the transaction price is allocated on a relative standalone selling price basis to each separate performance obligation. Management estimates the standalone selling prices for software license revenue using information that may include market conditions and other observable inputs. The Company analyzes standalone selling prices on a periodic basis to reevaluate changes to standalone selling price.

Auditing the Company's software license revenue recognition is challenging because of judgments required in allocating the transaction price to distinct performance obligations based on relative standalone selling price. For example, contracts containing multiple products or services requires judgment in identifying the distinct performance obligations in the contract, and the appropriate timing of revenue recognition for such performance obligations. Management's estimates of the standalone selling prices for software licenses used to allocate the transaction price are sensitive to changes in management's business practices, such as pricing strategies. Such changes can have a significant impact on the determination of standalone selling price.

*How We
Addressed the
Matter in Our
Audit*

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's processes to identify performance obligations, the estimation of the standalone selling price of each performance obligation, and the allocation of total consideration to be received over the contractual term to all performance obligations based on their relative standalone selling price.

Our audit procedures included, among others, an evaluation of management's assessment of performance obligations. In conjunction with this assessment, we inspected a sample of customer contracts and reviewed management's identification of performance obligations. We then tested the period over which management determined the revenue associated with each performance obligation should be recognized, as well as the standalone selling prices assigned to those performance obligations for purposes of allocating the transaction price. In testing the Company's estimate of standalone selling prices, we evaluated the accuracy and completeness of the underlying data used in management's analysis. This evaluation included assessing the effect of the Company's pricing practices for various transactions sizes and volumes across different product types.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2017.

Minneapolis, Minnesota
March 1, 2023

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Jamf Holding Corp.

Opinion on Internal Control Over Financial Reporting

We have audited Jamf Holding Corp.'s internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (the COSO criteria). In our opinion, because of the effect of the material weakness described below on the achievement of the objectives of the control criteria, Jamf Holding Corp. (the Company) has not maintained effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. The following material weakness has been identified and included in management's assessment. Management identified a material weakness related to the Company's subsidiary, Wandera. Specifically, management did not design and maintain effective controls over information technology general controls (ITGCs) for applications that are relevant to the revenue recognition process. As a result, the business process controls that are dependent on the ineffective ITGCs, or that use data produced from the systems impacted by the ineffective ITGCs were deemed ineffective at December 31, 2022.

As indicated in the accompanying Management's Report on Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of ZecOps, Inc., which is included in the 2022 consolidated financial statements of the Company and constituted 3% of the Company's consolidated total assets, as of December 31, 2022. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of ZecOps, Inc.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the accompanying consolidated balance sheets of Jamf Holding Corp. as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2022, and the related notes. This material weakness was considered in determining the nature, timing and extent of audit tests applied in our audit of the 2022 consolidated financial statements.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit

preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Ernst & Young LLP

Minneapolis, Minnesota
March 1, 2023

JAMF HOLDING CORP.
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	December 31,	
	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 224,338	\$ 177,150
Trade accounts receivable, net of allowances of \$445 and \$391 at December 31, 2022 and 2021, respectively	88,163	79,143
Income taxes receivable	465	608
Deferred contract costs	17,652	12,904
Prepaid expenses	14,331	17,581
Other current assets	6,097	4,212
Total current assets	<u>351,046</u>	<u>291,598</u>
Equipment and leasehold improvements, net	19,421	18,045
Goodwill	856,925	845,734
Other intangible assets, net	218,744	264,593
Deferred contract costs, non-current	39,643	29,842
Other assets	43,763	30,608
Total assets	<u>\$ 1,529,542</u>	<u>\$ 1,480,420</u>
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 15,393	\$ 9,306
Accrued liabilities	67,051	54,022
Income taxes payable	486	167
Deferred revenues	278,038	223,031
Total current liabilities	<u>360,968</u>	<u>286,526</u>
Deferred revenues, non-current	68,112	59,097
Deferred tax liability, net	5,505	8,700
Convertible senior notes, net	364,505	362,031
Other liabilities	29,114	25,640
Total liabilities	<u>828,204</u>	<u>741,994</u>
Commitments and contingencies (Note 8)		
Stockholders' equity:		
Preferred stock, \$0.001 par value, 50,000,000 shares authorized at December 31, 2022 and 2021; no shares issued and outstanding at December 31, 2022 and 2021	—	—
Common stock, \$0.001 par value, 500,000,000 shares authorized at December 31, 2022 and 2021; 123,170,172 and 119,426,064 shares issued and outstanding at December 31, 2022 and 2021, respectively	123	119
Additional paid-in capital	1,049,875	913,581
Accumulated other comprehensive loss	(39,951)	(7,866)
Accumulated deficit	(308,709)	(167,408)
Total stockholders' equity	<u>701,338</u>	<u>738,426</u>
Total liabilities and stockholders' equity	<u>\$ 1,529,542</u>	<u>\$ 1,480,420</u>

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

JAMF HOLDING CORP.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share amounts)

	Years Ended December 31,		
	2022	2021	2020
Revenue:			
Subscription	\$ 455,007	\$ 344,243	\$ 248,879
Services	19,025	16,122	14,519
License	4,744	6,023	5,734
Total revenue	<u>478,776</u>	<u>366,388</u>	<u>269,132</u>
Cost of revenue:			
Cost of subscription (exclusive of amortization expense shown below)	85,479	63,441	39,529
Cost of services (exclusive of amortization expense shown below)	13,816	10,898	10,726
Amortization expense	19,932	16,018	10,753
Total cost of revenue	<u>119,227</u>	<u>90,357</u>	<u>61,008</u>
Gross profit	359,549	276,031	208,124
Operating expenses:			
Sales and marketing	217,728	148,192	98,885
Research and development	119,906	82,541	52,513
General and administrative	132,562	96,206	51,603
Amortization expense	28,227	25,294	22,575
Total operating expenses	<u>498,423</u>	<u>352,233</u>	<u>225,576</u>
Loss from operations	(138,874)	(76,202)	(17,452)
Interest expense, net	(538)	(2,478)	(10,741)
Loss on extinguishment of debt	—	(449)	(5,213)
Foreign currency transaction loss	(2,802)	(849)	(722)
Other income, net	—	—	91
Loss before income tax benefit	<u>(142,214)</u>	<u>(79,978)</u>	<u>(34,037)</u>
Income tax benefit	913	4,789	9,955
Net loss	<u>\$ (141,301)</u>	<u>\$ (75,189)</u>	<u>\$ (24,082)</u>
Net loss per share, basic and diluted	\$ (1.17)	\$ (0.64)	\$ (0.22)
Weighted-average shares used to compute net loss per share, basic and diluted	120,720,972	118,276,462	108,908,597

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

JAMF HOLDING CORP.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	Years Ended December 31,		
	2022	2021	2020
Net loss	\$ (141,301)	\$ (75,189)	\$ (24,082)
Other comprehensive loss:			
Foreign currency translation adjustments	(32,085)	(7,866)	—
Total other comprehensive loss	(32,085)	(7,866)	—
Comprehensive loss	\$ (173,386)	\$ (83,055)	\$ (24,082)

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

JAMF HOLDING CORP.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share amounts)

	Stock Class		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Stockholders' Equity
	Common					
	Shares	Amount				
Balance, December 31, 2019	102,843,612	\$ 103	\$ 568,756	\$ —	\$ (68,137)	\$ 500,722
Issuance of common stock upon initial public offering, net of underwriting discounts and commissions, offering costs, and tax	13,500,000	14	322,399	—	—	322,413
Private placement	85,880	—	2,233	—	—	2,233
Exercise of stock options	526,460	—	2,985	—	—	2,985
Vesting of restricted stock units	36,520	—	—	—	—	—
Share-based compensation	—	—	6,743	—	—	6,743
Net loss	—	—	—	—	(24,082)	(24,082)
Balance, December 31, 2020	116,992,472	117	903,116	—	(92,219)	811,014
Exercise of stock options	1,903,560	1	10,690	—	—	10,691
Vesting of restricted stock units	530,032	1	—	—	—	1
Share-based compensation	—	—	35,805	—	—	35,805
Purchase of capped calls	—	—	(36,030)	—	—	(36,030)
Foreign currency translation adjustment	—	—	—	(7,866)	—	(7,866)
Net loss	—	—	—	—	(75,189)	(75,189)
Balance, December 31, 2021	119,426,064	119	913,581	(7,866)	(167,408)	738,426
Exercise of stock options	842,188	1	5,202	—	—	5,203
Vesting of restricted stock units	1,895,620	2	—	—	—	2
Issuance of common stock under the employee stock purchase plan	295,189	—	6,840	—	—	6,840
Issuance of common stock in connection with business combination	711,111	1	15,082	—	—	15,083
Share-based compensation	—	—	109,170	—	—	109,170
Foreign currency translation adjustment	—	—	—	(32,085)	—	(32,085)
Net loss	—	—	—	—	(141,301)	(141,301)
Balance, December 31, 2022	123,170,172	\$ 123	\$ 1,049,875	\$ (39,951)	\$ (308,709)	\$ 701,338

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

JAMF HOLDING CORP.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Years Ended December 31,		
	2022	2021	2020
Operating activities			
Net loss	\$ (141,301)	\$ (75,189)	\$ (24,082)
Adjustments to reconcile net loss to cash provided by operating activities:			
Depreciation and amortization expense	54,830	47,069	38,511
Amortization of deferred contract costs	16,563	12,534	7,953
Amortization of debt issuance costs	2,722	1,251	773
Non-cash lease expense	5,869	4,994	—
Provision for credit losses and returns	328	37	1,024
Loss on extinguishment of debt	—	449	5,213
Share-based compensation	109,170	35,805	6,743
Deferred tax benefit	(2,955)	(5,644)	(10,318)
Adjustment to contingent consideration	694	6,037	(1,000)
Other	3,333	1,419	(490)
Changes in operating assets and liabilities:			
Trade accounts receivable	(9,487)	(6,521)	(23,112)
Income tax receivable/payable	266	(611)	(766)
Prepaid expenses and other assets	1,773	(9,265)	(3,620)
Deferred contract costs	(31,134)	(24,795)	(20,398)
Accounts payable	5,891	2,069	4,026
Accrued liabilities	10,017	4,345	5,501
Deferred revenue	63,426	71,216	64,945
Other liabilities	—	(35)	1,898
Net cash provided by operating activities	<u>90,005</u>	<u>65,165</u>	<u>52,801</u>
Investing activities			
Acquisitions, net of cash acquired	(23,816)	(352,711)	(2,512)
Payment of deferred consideration	—	(25,000)	—
Purchases of equipment and leasehold improvements	(7,727)	(9,755)	(4,368)
Purchase of investments	(3,100)	—	—
Other	(139)	48	4
Net cash used in investing activities	<u>(34,782)</u>	<u>(387,418)</u>	<u>(6,876)</u>
Financing activities			
Proceeds from convertible senior notes	—	373,750	—
Proceeds from bank borrowings	—	250,000	—
Payment of bank borrowings	—	(250,000)	(205,000)
Payment for purchase of capped calls	—	(36,030)	—
Debt issuance costs	(50)	(13,134)	(1,264)
Payment of debt extinguishment costs	—	—	(2,050)
Proceeds from initial public offering, net of underwriting discounts and commissions	—	—	326,316
Cash paid for offering costs	(104)	(543)	(7,256)
Proceeds from private placement	—	—	2,233
Cash paid for contingent consideration	(4,588)	(4,206)	—
Payment of deferred consideration	—	(25,000)	—
Payment of acquisition-related holdback	(200)	—	—
Proceeds from the exercise of stock options	5,203	10,691	2,985
Net cash provided by financing activities	<u>261</u>	<u>305,528</u>	<u>115,964</u>
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(713)	(993)	604
Net increase (decrease) in cash, cash equivalents, and restricted cash	54,771	(17,718)	162,493
Cash, cash equivalents, and restricted cash, beginning of period	177,150	194,868	32,375
Cash, cash equivalents, and restricted cash, end of period	<u>\$ 231,921</u>	<u>\$ 177,150</u>	<u>\$ 194,868</u>

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

JAMF HOLDING CORP.
CONSOLIDATED STATEMENTS OF CASH FLOWS (continued)
(in thousands)

	Years Ended December 31,		
	2022	2021	2020
Supplemental disclosures of cash flow information:			
Cash paid for:			
Interest	\$ 763	\$ 967	\$ 12,649
Income taxes, net of refunds	1,747	1,334	1,394
Non-cash activities:			
Employee stock purchase plan	6,840	—	—
Debt issuance costs accrued but not paid	—	50	—
Operating lease assets obtained in exchange for operating lease liabilities	8,159	1,470	—
Purchases of equipment and leasehold improvements accrued but not paid	419	—	—
Issuance of common stock for the acquisition of business	15,083	—	—
Reconciliation of cash, cash equivalents, and restricted cash within the consolidated balance sheets to the amounts shown in the consolidated statements of cash flows above:			
Cash and cash equivalents	\$ 224,338	\$ 177,150	\$ 194,868
Restricted cash included in other current assets	383	—	—
Restricted cash included in other assets	7,200	—	—
Total cash, cash equivalents, and restricted cash	<u>\$ 231,921</u>	<u>\$ 177,150</u>	<u>\$ 194,868</u>

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

JAMF HOLDING CORP.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Basis of presentation and description of business

Description of business

Jamf Holding Corp. and its wholly owned subsidiaries, collectively, are referred to as the “Company,” “we,” “us,” or “our.” We are the standard in managing and securing Apple at work, and we are the only company in the world that provides a complete management and security solution for an Apple-first environment that is designed to be enterprise secure, consumer simple, and protective of personal privacy. We help IT and security teams confidently protect the devices, data, and applications used by their workforce, while providing employees with consumer-simple, privacy-protecting technology. With Jamf’s software, devices can be deployed to employees brand new in the shrink-wrapped box, set up automatically and personalized at first power-on and administered continuously throughout the lifecycle of the device. Our customers are located throughout the world.

Initial public offering

On July 24, 2020, the Company closed its IPO through which it issued and sold 13,500,000 shares of common stock at the IPO Price of \$26.00 per share. In connection with the IPO, the Company raised approximately \$319.0 million after deducting the underwriting discount and commissions of \$24.7 million and offering expenses of \$7.3 million. Upon completion of the IPO, authorized capital stock consisted of 500,000,000 shares of common stock, par value \$0.001 per share, and 50,000,000 shares of undesignated preferred stock, par value \$0.001 per share.

Concurrently with the Company’s IPO, the Company issued and sold 85,880 shares of its common stock in a private placement to certain of its named executive officers, certain of its other employees, and its independent directors at the IPO Price of \$26.00 per share for aggregate consideration of approximately \$2.2 million.

Upon closing of the IPO, the Company repaid \$205.0 million of the principal amount of the 2017 Term Loan Facility and paid \$3.4 million of accrued interest and \$2.0 million of prepayment penalty. The Company also wrote off \$3.2 million of remaining debt issuance costs upon repayment of the debt. The Company recorded a loss on debt extinguishment of \$5.2 million for the prepayment penalty and write off of debt issuance costs in the third quarter of 2020.

Basis of presentation and principles of consolidation

The consolidated financial statements, which include the accounts of the Company and its wholly owned subsidiaries, have been prepared in accordance with GAAP. All intercompany accounts and transactions have been eliminated.

Use of estimates

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities as of the reporting date, and the reported amounts of revenues and expenses during the reporting period. These estimates are based on management’s best knowledge of current events and actions that the Company may undertake in the future and include, but are not limited to, revenue recognition, stock-based compensation, commissions, the fair values of assets acquired and liabilities assumed in business combinations, useful lives for finite-lived assets, recoverability of long-lived assets, the value of ROU assets and lease liabilities, allowance for expected credit losses, commitments and contingencies, and accounting for income taxes and related valuation allowances against deferred tax assets. Actual results could differ from those estimates.

Segment and geographic information

Our CODM is our Chief Executive Officer, who reviews financial information presented on a consolidated basis for purposes of making operating decisions, assessing financial performance, and allocating resources. We operate our business as one operating segment and therefore we have one reportable segment.

Revenues by geographic region as determined based on the location where the sale originated were as follows:

	Years Ended December 31,		
	2022	2021 ⁽¹⁾	2020 ⁽¹⁾
	(in thousands)		
The Americas ⁽²⁾	\$ 330,704	\$ 261,516	\$ 202,737
Europe, the Middle East, India, and Africa	113,861	79,918	50,534
Asia Pacific	34,211	24,954	15,861
	<u>\$ 478,776</u>	<u>\$ 366,388</u>	<u>\$ 269,132</u>

⁽¹⁾ Previously reported revenues by geographic region for the years ended December 31, 2021 and 2020 have been revised to correct an immaterial error in the disclosure. There was no impact to total revenues.

⁽²⁾ The vast majority of our Americas revenues comes from the U.S.

Long-lived assets, which include equipment and leasehold improvements, net and operating lease ROU assets for purposes of this disclosure, by geographic region were as follows:

	December 31,	
	2022	2021
	(in thousands)	
The Americas	\$ 28,087	\$ 30,459
Europe, the Middle East, India, and Africa	4,904	6,839
Asia Pacific	10,258	2,347
	<u>\$ 43,249</u>	<u>\$ 39,645</u>

The U.S. held 65% and 77% of the total long-lived assets as of December 31, 2022 and 2021, respectively.

Note 2. Summary of significant accounting policies

Net loss per share of common stock

Basic net loss per common share is calculated by dividing the net loss by the weighted-average number of common shares outstanding during the period without consideration for potentially dilutive securities. Diluted net loss per common share is calculated by dividing the net loss by the weighted-average number of common shares and potentially dilutive securities outstanding during the period. The potentially dilutive securities include outstanding stock options, unvested RSUs, shares related to the 2026 Notes, and shares issuable pursuant to the 2021 ESPP and are determined by applying either the treasury-stock method or the if-converted method, as applicable. Because we have reported a net loss for the years ended December 31, 2022, 2021, and 2020, the number of shares used to calculate diluted net loss per common share is the same as the number of shares used to calculate basic net loss per common share for those periods given that the potentially dilutive shares would have been anti-dilutive if included in the calculation.

Cash and cash equivalents

The Company considers any highly liquid investments purchased with original maturities at the time of purchase of three months or less to be cash equivalents. The Company maintains cash in deposit accounts that, at times, may exceed federally insured limits. The Company has not experienced any losses in such accounts.

Trade accounts receivable, net

Credit is extended to customers in the normal course of business. Trade accounts receivable are recorded at the invoiced amount, net of allowances.

Effective January 1, 2021, upon adoption of ASU 2016-13, the allowance for credit losses is based on an expected loss model that estimates losses over the expected life of the trade accounts receivable. The Company estimates expected credit losses based on the Company's historical loss information, current and future economic and market conditions, and ongoing review of customers' account balances. Prior to the adoption of ASU 2016-13, the Company determined the allowance for doubtful accounts based on the delinquency of the account, the financial condition of the customer, and the Company's collection experience.

The Company writes-off a receivable against the allowance when a determination is made that the balance is uncollectible and collection of the receivable is no longer being actively pursued. This determination is based on the delinquency of the account, the financial condition of the customer, and the Company's collection experience.

Activity related to our allowance for credit losses for trade accounts receivable was as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Balance, beginning of period	\$ 391	\$ 530	\$ 200
Provision	328	143	824
Write-offs	(321)	(373)	(494)
Recoveries of amounts previously written off	47	91	—
Balance, end of period	<u>\$ 445</u>	<u>\$ 391</u>	<u>\$ 530</u>

Equipment and leasehold improvements, net

Equipment and leasehold improvements are recorded at cost less accumulated depreciation. Expenditures for renewals and betterments that extend the life of such assets are capitalized. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. These lives are three years for computers and server equipment, three years for software, five years for furniture and fixtures, and the lesser of the lease term or the useful life of the leasehold improvements. Repair and maintenance costs are expensed as incurred. Differences between amounts received and the net carrying value of assets retired or disposed of are charged to income as incurred.

Equipment and leasehold improvements, net are tested for impairment whenever events or circumstances indicate that the carrying amount of an asset may not be recoverable. There were no impairment losses recognized during the years ended December 31, 2022, 2021, and 2020.

Business combinations

When the Company acquires a business, the purchase price is allocated to the assets acquired and liabilities assumed based on their estimated fair values as of the date of acquisition. The allocation of the purchase price requires management to make significant estimates in determining the fair value of assets acquired and liabilities assumed, especially with respect to intangible assets. These estimates are inherently uncertain and unpredictable. During the measurement period, which may be up to one year from the acquisition date, adjustments to the fair value of the assets acquired and liabilities assumed may be recorded with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the fair value of the assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the consolidated statements of operations. Acquisition-related costs are expensed as incurred.

Goodwill

The Company evaluates goodwill for impairment in accordance with ASC 350, which requires goodwill to be either qualitatively or quantitatively assessed for impairment annually (or more frequently if impairment indicators arise) for each reporting unit. The Company has one reporting unit. The Company performs its impairment testing of goodwill at least annually and more frequently if events occur that would indicate that it is more likely than not the fair value of the reporting unit is less than the carrying value. If the Company's reporting unit carrying amount exceeds its fair value, an impairment charge will be recorded based on that difference. The impairment charge will be limited to the amount of goodwill currently recognized in the Company's single reporting unit. The Company elected to perform a quantitative assessment of goodwill as of October 1, 2022, and no impairment was identified. No other interim impairment tests were deemed necessary.

Other intangibles, net

Intangible assets with finite lives include trademarks, customer relationships, developed technology, non-competes, and order backlog. These assets are amortized over their estimated useful lives, which range from two to twelve years, on a straight-line basis. Intangible assets with finite lives are tested for impairment whenever events or circumstances indicate that the carrying amount of an asset (asset group) may not be recoverable. An impairment loss is recognized when the carrying amount of an asset exceeds the estimated undiscounted cash flows generated by the asset. The amount of the impairment loss

recorded is calculated by the excess of the asset's carrying value over its fair value. There were no material impairment losses recognized during the years ended December 31, 2022, 2021, and 2020.

Intangible assets with indefinite lives as of December 31, 2021 included IPR&D. These assets are not amortized, but are assessed for potential impairment annually or when circumstances indicate that the carrying amount may not be recoverable. There were no impairment losses recognized during the year ended December 31, 2021.

Operating leases

The Company adopted ASC 842 on January 1, 2021 using the optional transition method to the modified retrospective approach. Under this transition provision, results for reporting periods beginning on or after January 1, 2021 are presented under ASC 842 while prior period amounts continue to be reported and disclosed in accordance with the Company's historical accounting treatment under ASC 840.

The Company determines if an arrangement is or contains a lease at inception, which is the date on which the terms of the contract are agreed to and the agreement creates enforceable rights and obligations. Under ASC 842, a contract is or contains a lease when (i) explicitly or implicitly identified assets have been deployed in the contract and (ii) the customer obtains substantially all of the economic benefits from the use of that underlying asset and directs how and for what purpose the asset is used during the term of the contract. The Company also considers whether its service arrangements include the right to control the use of an asset.

The Company recognizes ROU assets and lease liabilities based on the present value of lease payments over the lease term at the commencement date of the lease (or January 1, 2021 for existing leases upon the adoption of ASC 842). The ROU assets also include any initial direct costs incurred and lease payments made at or before the commencement date and are reduced by any lease incentives. The Company made an accounting policy election under ASC 842 not to recognize ROU assets and lease liabilities for leases with a term of twelve months or less.

Future lease payments may include fixed rent escalation clauses or payments that depend on an index (such as the consumer price index). Subsequent changes to an index and other periodic market-rate adjustments to base rent are recorded in variable lease expense in the period incurred.

The Company made an accounting policy election to account for lease and non-lease components in its contracts as a single lease component for all asset classes. The non-lease components typically represent additional services transferred to the Company, such as common area maintenance for real estate, which are variable in nature and recorded in variable lease expense in the period incurred.

The Company uses its incremental borrowing rate to determine the present value of lease payments as the Company's leases do not have a readily determinable implicit discount rate. The incremental borrowing rate is the rate of interest the Company would have to pay to borrow on a collateralized basis over a similar term and amount in a similar economic environment. Judgement is applied in assessing factors such as Company specific credit risk, lease term, nature and quality of the underlying collateral, currency, and economic environment in determining the incremental borrowing rate to apply to each lease.

Debt issuance costs

Costs of debt financing are charged to expense over the lives of the related financing agreements. Remaining costs and the future period over which they would be charged to expense are reassessed when amendments to the related financing agreements or prepayments occur. Debt issuance costs for the Company's 2026 Notes are recognized as an offset to the liability and are amortized using the effective-interest method. Debt issuance costs for the Company's revolving line of credit are recognized in other assets and are amortized on a straight-line basis.

Stock split

On July 10, 2020, the Company effected a 110-for-1 stock split of its common stock. The par value of the common stock was not adjusted as a result of the stock split. Accordingly, all share and per share amounts for all periods presented in the accompanying consolidated financial statements and notes thereto have be adjusted retrospectively, where applicable, to reflect this stock split.

Offering costs

Prior to the IPO, the Company capitalized offering costs incurred in connection with the sale of common stock in the IPO, including legal, accounting, printing, and other IPO-related costs. Upon completion of the IPO, \$7.3 million of deferred offering costs were reclassified to stockholders' equity and recorded against the proceeds from the offering. During the years ended December 31, 2022, 2021, and 2020, the Company incurred costs of \$0.1 million, \$0.6 million, and \$0.7 million, respectively, in connection with prospective and completed secondary offerings after the IPO. The Company did not receive any proceeds as only certain selling shareholders participated in these offerings. These costs were expensed as incurred and included in general and administrative expenses in the consolidated statements of operations.

Foreign currency

Our reporting currency is the U.S. dollar. The functional currency of our foreign operations, except for Jamf Ltd. and its subsidiaries, is the U.S. dollar. The functional currency of Jamf Ltd. and its subsidiaries is the GBP. The assets, liabilities, revenues, and expenses of our foreign operations are remeasured in accordance with ASC 830. Remeasurement adjustments are recorded as foreign currency transaction gains (losses) in the consolidated statements of operations. Assets and liabilities of Jamf Ltd. and its subsidiaries are translated into U.S. dollars based upon exchange rates prevailing at the end of each period. Revenues and expenses of Jamf Ltd. and its subsidiaries are translated at weighted-average exchange rates on a monthly basis. The resulting translation adjustment is included in accumulated other comprehensive loss.

Stock-based compensation

In accordance with ASC 718, the Company recognizes compensation expense for all stock-based awards granted to our employees and non-employee directors in the consolidated statements of operations based on the estimated fair value of the awards on the date of grant. We use the Black-Scholes option pricing model to estimate the fair value of service-based options and purchase rights granted under the 2021 ESPP. We use the fair market value of our common stock on the date of grant to estimate the fair value of RSUs. We recognize compensation expense for service-based options and RSUs on a straight-line basis over the applicable vesting period. We recognize compensation expense for the purchase rights granted under the 2021 ESPP on a straight-line basis over the offering period. Forfeitures are accounted for as they occur.

The Company has also granted performance-based awards (also referred to as return target options) to certain executives. The Company uses a Modified Black-Scholes option pricing model, which uses Level 3 inputs for fair value measurement, to estimate the fair value. The contractual term of the awards is 10 years. As originally granted, the performance-based awards would vest and become exercisable when Vista's realized cash return on its investment in the Company equaled or exceeded \$1.515 billion upon the Termination Event. In conjunction with the IPO, the vesting conditions of the performance-based awards were modified to also vest following an IPO and registration and sale of shares by Vista provided that Vista achieved a cash return on its equity investment in the Company equaling or exceeding \$1.515 billion. In accordance with ASC 718, we calculated the fair value of these options on the modification date. The value of these options on the date of modification as of June 30, 2020 was \$33.0 million. As the awards were not considered probable of meeting the vesting requirements, no expense was recognized during the years ended December 31, 2021 and 2020.

The Company used the following assumptions in the Modified Black-Scholes option pricing model to estimate the fair value of return target options modified during the year ended December 31, 2020:

Expected life of options	1.5 years
Expected volatility	55%
Risk-free interest rates	0.16%
Expected dividend yield	—%
Weighted-average grant-date fair value	\$8.95

On June 24, 2022, the Company filed a Form S-3 "shelf" registration statement to facilitate future selling shareholder sales of common stock, including by Vista, and the achievement of the performance condition became probable, which resulted in the recognition of \$33.0 million of stock-based compensation expense. On June 27, 2022, the return target options outstanding were modified such that these options were deemed fully vested as of June 30, 2022. The fair value of the awards immediately before the modification was higher than the fair value immediately after the modification and therefore no incremental compensation cost was recognized.

The Black-Scholes option pricing model requires the use of subjective assumptions as inputs. These assumptions include the following:

- *Expected Term* — The expected term of stock options represents the weighted-average period the stock options are expected to be outstanding. For time-based awards, the estimated expected term of the options granted is generally calculated as the vesting period plus the midpoint of the remaining contractual term as the Company does not have sufficient historical information to develop reasonable expectations surrounding future exercise patterns and post-vesting employment termination behavior. The expected term for the purchase rights issued under the 2021 ESPP is based on the duration of the offering period.
- *Expected Volatility* — For return target options modified during the year ended December 31, 2020 and return target options and service-based options granted during the year ended December 31, 2019, the expected stock price volatility assumption was determined by examining the historical volatility of a group of industry peers as the Company did not have substantive trading history for its common stock. For the purchase rights issued under the 2021 ESPP, the expected volatility was based on the Company's historical data.
- *Risk-Free Interest Rate* — The risk-free rate assumption was based on U.S. Treasury instruments with terms that were consistent with the expected term of the Company's stock options and offering period for the 2021 ESPP.
- *Expected Dividend* — The Company uses an expected dividend yield of zero as we do not currently pay dividends and have no plans to pay dividends in the foreseeable future.
- *Fair Value of Common Stock* — Following the IPO, the Company's shares are publicly traded, and the Company uses the applicable closing price of its common stock to determine fair value. Prior to the IPO, the fair value of the shares of common stock underlying the stock options had historically been the responsibility of and determined by the Company's Board. Because there was no public market for the Company's common stock prior to our IPO, the Board used independent third-party valuations of the Company's common stock, operating and financial performance, and general and industry-specific economic outlook, amongst other factors.

Income taxes

We account for income taxes in accordance with ASC 740 under which deferred tax liabilities and assets are recognized for the expected future tax consequences of temporary differences between financial statement carrying amounts and the tax basis of assets and liabilities, NOLs, and tax credit carryforwards. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized.

We use a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. A tax position is recognized when it is more likely than not that the tax position will be sustained upon examination, including resolution of any related appeals or litigation processes. A tax position that meets the more-likely-than-not recognition threshold is measured at the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement with a taxing authority. The standard also provides guidance on derecognition of tax benefits, classification on the balance sheet, interest and penalties, accounting in interim periods, disclosure, and transition.

Revenue recognition

The Company applies ASC 606 and follows a five-step model to determine the appropriate amount of revenue to be recognized in accordance with ASC 606:

- Identify the contract with a customer
- Identify the performance obligations in the contract
- Determine the transaction price
- Allocate the transaction price to the performance obligations in the contract
- Recognize revenue when or as performance obligations are satisfied

The Company's revenue is primarily derived from sales of SaaS subscriptions, support and maintenance contracts, software licenses, and related professional services. The Company's products and services are marketed and sold directly, as well as indirectly through third-party resellers, to the end-user.

The Company assesses the contract term as the period in which the parties to the contract have enforceable rights and obligations. The contract term can differ from the stated term in contracts with certain termination or renewal rights, depending on whether there are substantive penalties associated with those rights. Customer contracts are generally standardized and non-cancelable for the duration of the stated contract term.

Nature of Products and Services

Subscription: Subscription includes SaaS subscription arrangements, which include a promise to allow customers to access software hosted by the Company over the contract period without allowing the customer to take possession of the software or transfer hosting to a third party. Subscription also includes support and maintenance, which includes when-and-if available software updates and technical support on our perpetual and on-premise term-based subscription licenses. Because the subscription represents a stand-ready obligation to provide a series of distinct periods of access to the subscription, which are all substantially the same and that have the same pattern of transfer to the customer, subscriptions are accounted for as a series and revenue is recognized ratably over the contract term, beginning at the point when the customer is able to use and benefit from the subscription. Subscription also includes sales of on-premise term-based subscription arrangements. Licenses for on-premise term-based software provide the customer with a right to use the software as it exists when made available to the customer. Revenue from software licenses is recognized upon transfer of control to the customer, which is typically upon making the software available to the customer.

Services: Services, including training, are often sold as part of new software license or subscription contracts. These services are fulfilled by the Company and with the use of other vendors and do not significantly modify, integrate, or otherwise depend on other performance obligations included in the contracts. Services are generally performed over a one- to two-day period and, when sold as part of new software license or subscription contracts, at or near the outset of the related contract. When other vendors participate in the provisioning of the services, the Company recognizes the related revenue on a gross basis as the Company is the principal in these arrangements. Revenue related to services is recognized as the Company's performance obligation is fulfilled. Related fulfillment costs are recognized as incurred.

License: License includes sales of on-premise perpetual software. Licenses for on-premise perpetual software provide the customer with a right to use the software as it exists when made available to the customer. Revenue from on-premise perpetual software licenses is recognized upon transfer of control to the customer, which is typically upon making the software available to the customer.

Certain contracts may include explicit options to renew subscriptions or maintenance at a stated price. These options are generally priced in line with the SSP and therefore do not provide a material right to the customer. If the option provides a material right to the customer, then the material right is accounted for as a separate performance obligation, and the Company recognizes revenue when those future goods or services underlying the option are transferred or when the option expires.

Transaction Price

The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring goods and services to the customer. The transaction price is exclusive of amounts collected on behalf of third parties, such as sales tax and value-added tax.

Significant Judgments

When the Company's contracts with customers contain multiple performance obligations, the contract transaction price is allocated based on a relative SSP basis to each performance obligation. The Company typically determines SSP based on observable selling prices of its products and services.

In instances where SSP is not directly observable, such as with software licenses that are never sold on a stand-alone basis, SSP is determined using information that may include market conditions and other observable inputs. SSP is typically established as ranges, and the Company typically has more than one SSP range for individual products and services due to the stratification of those products and services by customer class, channel type, and purchase quantity, among other circumstances. The SSP is reassessed periodically or when facts and circumstances change.

Disaggregation of Revenue

The Company separates revenue into subscription and non-subscription categories to disaggregate those revenues that are term-based and renewable from those that are one-time in nature. Revenue from subscription and non-subscription contractual arrangements were as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
SaaS subscription and support and maintenance	\$ 430,613	\$ 313,950	\$ 223,655
On-premise subscription	24,394	30,293	25,224
Subscription revenue	455,007	344,243	248,879
Professional services	19,025	16,122	14,519
Perpetual licenses	4,744	6,023	5,734
Non-subscription revenue	23,769	22,145	20,253
Total revenue	<u>\$ 478,776</u>	<u>\$ 366,388</u>	<u>\$ 269,132</u>

Contract Balances

The timing of revenue recognition may not align with the right to invoice the customer. The Company records accounts receivable when it has the unconditional right to issue an invoice and receive payment regardless of whether revenue has been recognized. For multiyear agreements, the Company will either invoice the customer in full at the inception of the contract or in installments (generally annually at the beginning of each renewal period). If revenue has not yet been recognized, then a contract liability (deferred revenue) is also recorded. Deferred revenue classified as current in the consolidated balance sheets is expected to be recognized as revenue within one year. Non-current deferred revenue will generally be fully recognized within five years. If revenue is recognized in advance of the right to invoice, a contract asset is recorded in other current assets on the consolidated balance sheets. The opening and closing balances of contract assets were as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Balance, beginning of the period	\$ 1,792	\$ 947	\$ 499
Balance, end of the period	817	1,792	947
Change	<u>\$ (975)</u>	<u>\$ 845</u>	<u>\$ 448</u>

For the years ended December 31, 2022 and 2021, the allowance for expected credit losses associated with contract assets was not material.

Changes in contract liabilities, including revenue earned during the period from the beginning contract liability balance and new deferrals of revenue during the period, were as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Balance, beginning of the period	\$ 282,128	\$ 205,509	\$ 140,449
Acquisitions	1,014	5,200	—
Revenue earned	(222,964)	(160,002)	(127,915)
Deferral of revenue	287,608	231,421	192,975
Other ⁽¹⁾	(1,636)	—	—
Balance, end of the period	<u>\$ 346,150</u>	<u>\$ 282,128</u>	<u>\$ 205,509</u>

⁽¹⁾ Includes contract assets netted against contract liabilities on a contract-by-contract basis.

There were no significant changes to our contract assets and liabilities during the years ended December 31, 2022, 2021, and 2020 outside of our sales activities.

In instances where the timing of revenue recognition differs from the timing of the right to invoice, the Company has determined that a significant financing component generally does not exist. The primary purpose of the Company's invoicing terms is to provide customers with simplified and predictable ways of purchasing the products and services and not to receive financing from or provide financing to the customer. Additionally, the Company has elected the practical expedient that permits an entity not to recognize a significant financing component if the time between the transfer of a good or service and payment is one year or less.

Payment terms on invoiced amounts are typically 30 to 60 days. The Company does not offer rights of return for its products and services in the normal course of business and contracts generally do not include customer acceptance clauses.

Remaining Performance Obligations

Revenue allocated to remaining performance obligations represents contracted revenue that has not yet been recognized, which includes deferred revenue and noncancellable amounts to be invoiced. As of December 31, 2022, the Company had \$427.3 million of remaining performance obligations, with 71% expected to be recognized as revenue over the succeeding 12 months, and the remainder generally expected to be recognized over the three years thereafter.

Deferred Contract Costs

Sales commissions, as well as associated payroll taxes and retirement plan contributions (together, contract costs), that are incremental to the acquisition of customer contracts are capitalized using a portfolio approach as deferred contract costs in the consolidated balance sheets when the period of benefit is determined to be greater than one year.

The Company has elected to apply the practical expedient to expense contract costs as incurred when the expected amortization period is one year or less. The judgments made in determining the amount of costs incurred include the portion of the commissions that are expensed in the current period versus the portion of the commissions that are recognized over the expected period of benefit, which often extends beyond the contract term as we generally do not pay commensurate commissions upon renewal of the service contracts. Contract costs are allocated to each performance obligation within the contract and amortized on a straight-line basis over the expected benefit period of the related performance obligations. Contract costs are amortized as a component of sales and marketing expenses in our consolidated statement of operations. We have determined that the expected period of benefit is generally five years based on evaluation of a number of factors, including customer attrition rates, weighted-average useful lives of our customer relationship and developed technology intangible assets, and market factors, including the overall competitive environment and technology life of competitors. Total amortization of contract costs for the years ended December 31, 2022, 2021, and 2020 was \$16.6 million, \$12.5 million, and \$8.0 million, respectively.

The Company periodically reviews these deferred contract costs to determine whether events or changes in circumstances have occurred that could affect the period of benefit of these deferred contract costs. There were no impairment losses recorded during the years ended December 31, 2022, 2021, or 2020.

Concentrations of Risk

For the year ended December 31, 2022, the Company had two distributors that each accounted for more than 10% of total net revenues. Total receivables related to these distributors were \$29.3 million as of December 31, 2022. For the year ended December 31, 2021, the Company had one distributor that accounted for more than 10% of total net revenues. Total receivables related to this distributor were \$17.4 million as of December 31, 2021. For the year ended December 31, 2020, the Company had two distributors that each accounted for more than 10% of total net revenues. Total receivables related to these distributors were \$19.8 million as of December 31, 2020. As of December 31, 2022 and 2021, these distributors accounted for 33% and 22%, respectively, of total receivables.

No single end customer accounted for more than 10% of total revenue for the years ended December 31, 2022, 2021, and 2020. No single end customer accounted for more than 10% of total receivables as of December 31, 2022 and 2021.

The Company hosts our cloud service from third-party data center facilities operated by AWS from several global locations. The Company has internal procedures to restore services in the event of disaster at any of its current data center facilities. Even with these procedures for disaster recovery in place, the Company's subscription services could be significantly interrupted during the time period following a disaster at one of its sites and the subsequent restoration of services at another site.

Research and development costs and software development costs

All research and development costs are expensed as incurred in accordance with ASC Topic 730, *Research and Development*. Software development costs required to be capitalized under ASC Topic 985-20, *Costs of Software to be Sold, Leased or Marketed*, and under ASC Topic 350-40, *Internal-Use Software*, were not material for the years ended December 31, 2022, 2021, and 2020.

Advertising costs

Advertising costs are expensed as incurred and presented within sales and marketing in the consolidated statements of operations. Advertising costs were \$22.7 million, \$17.0 million, and \$13.4 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Interest expense, net

For the year ended December 31, 2022, interest expense from debt financing of \$3.5 million is partially offset by interest income from cash investments of \$3.0 million. For the year ended December 31, 2021, interest expense from debt financing was \$2.5 million. For the year ended December 31, 2020, interest expense from debt financing of \$10.8 million is partially offset by interest income from cash investments of \$0.1 million.

Strategic investments

In the third quarter of 2022, the Company executed a \$2.0 million convertible promissory note with SwiftConnect. The note contains customary terms for an instrument of its type, including repayment or conversion upon certain future liquidity events. The note matures on July 29, 2024, and the Company intends to hold the note until maturity, unless it is otherwise repaid or converted pursuant to its terms. The investment is recorded at cost and included in other assets on the consolidated balance sheet. As of December 31, 2022, the balance of the investment was \$2.0 million. The Company evaluates its strategic investments quarterly for impairment. During the period ended December 31, 2022, there were no changes in the carrying value of the Company's strategic investments. All gains and losses on the Company's strategic investments, whether realized or unrealized, are recognized in the consolidated statements of operations.

Adoption of new accounting pronouncements

Business Combinations — Accounting for Contract Assets and Contract Liabilities from Contracts with Customers

In October 2021, the FASB issued ASU No. 2021-08, *Business Combinations (Topic 805), Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, which requires contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASC 606. Generally, this new guidance will result in the acquirer recognizing contract assets and contract liabilities at the same amounts recorded by the acquiree. Historically, such amounts were recognized by the acquirer at fair value in accordance with acquisition accounting. The new guidance should be applied prospectively to acquisitions occurring on or after the effective date. The standard is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early adoption is permitted, including in interim periods, for any financial statements that have not been issued. The Company early adopted the new standard on January 1, 2022. We applied the new guidance to acquisitions completed in 2022.

Note 3. Financial instruments fair value

The Company measures its financial instruments in accordance with ASC 820. ASC 820 defines fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. ASC 820 establishes a three-level fair value hierarchy, which prioritizes the use of observable inputs from active markets and minimizes the use of unobservable inputs when measuring fair value. A level is assigned to each fair value measurement based on the lowest level of input that is significant to the fair value measurement. The levels of the fair value hierarchy are as follows:

Level 1: Fair value is determined using an unadjusted quoted price in an active market for identical assets or liabilities.

Level 2: Fair value is estimated using inputs other than quoted prices included within Level 1 that are observable, either directly or indirectly.

Level 3: Fair value is estimated using unobservable inputs that are significant to the fair value of the assets or liabilities.

Assets and liabilities measured at fair value on a recurring basis

The Company invests in money market funds with original maturities at the time of purchase of three months or less, which are measured and recorded at fair value on a recurring basis. Money market funds are valued based on quoted market prices in active markets and classified within Level 1 of the fair value hierarchy.

In addition, the contingent consideration associated with the Digita and cmdReporter acquisitions are measured and recorded at fair value on a recurring basis. The estimated fair value of the contingent payments associated with the Digita acquisition is determined using a Monte Carlo simulation model, which uses Level 3 inputs, including assumptions about the probability of growth of subscription services and the related pricing of the services offered. Significant increases (decreases) in the probability of growth of subscription services as well as the related pricing of the services offered would have resulted in a higher (lower) fair value measurement. The estimated fair value of the contingent payments associated with the cmdReporter acquisition was determined using projected contract wins, which used Level 3 inputs, including assumptions about the probability of closing contracts based on their current stage in the sales process. See Note 5 for more information.

The fair value of these financial instruments were as follows:

	December 31, 2022			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets				
Cash equivalents:				
Money market funds	\$ 132,306	\$ —	\$ —	\$ 132,306
Total cash equivalents	<u>\$ 132,306</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 132,306</u>
Liabilities				
Contingent consideration:				
Accrued liabilities	\$ —	\$ —	\$ 6,206	\$ 6,206
Total contingent consideration	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 6,206</u>	<u>\$ 6,206</u>
December 31, 2021				
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets				
Cash equivalents:				
Money market funds	\$ 146,037	\$ —	\$ —	\$ 146,037
Total cash equivalents	<u>\$ 146,037</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 146,037</u>
Liabilities				
Contingent consideration:				
Accrued liabilities	\$ —	\$ —	\$ 4,588	\$ 4,588
Other liabilities	—	—	5,512	5,512
Total contingent consideration	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 10,100</u>	<u>\$ 10,100</u>

The carrying value of accounts receivable and accounts payable approximate their fair value due to their short maturities and are excluded from the tables above.

The following table provides a summary of the changes in contingent consideration, which is classified as Level 3:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Balance, beginning of period	\$ 10,100	\$ 8,200	\$ 9,200
Additions	—	359	—
Total (gains) losses included in:			
Net loss	694	6,037	(1,000)
Payments	(4,588)	(4,206)	—
Other	—	(290)	—
Balance, end of period	<u>\$ 6,206</u>	<u>\$ 10,100</u>	<u>\$ 8,200</u>

The change in the fair value of the contingent consideration is included in general and administrative expenses in the consolidated statements of operations. The adjustments for the years ended December 31, 2022 and 2021 primarily reflected updated assumptions about the probability of growth of subscription services. The adjustment for the year ended December 31, 2020 primarily reflected a decrease in the liability due to updated assumptions about the probability of change in control as a result of our IPO, partially offset by an increase in the liability due to updated assumptions about the probability of growth of subscription services.

Fair value measurements of other financial instruments

The following table presents the net carrying value and estimated fair value of the 2026 Notes, which are not recorded at fair value in the consolidated balance sheets:

	December 31, 2022		December 31, 2021	
	Net Carrying Value	Estimated Fair Value	Net Carrying Value	Estimated Fair Value
	(in thousands)			
2026 Notes	\$ 364,505	\$ 308,504	\$ 362,031	\$ 398,044

As of December 31, 2022 and 2021, the difference between the net carrying value of the 2026 Notes and the principal amount of \$373.8 million represents the unamortized debt issuance costs of \$9.2 million and \$11.7 million, respectively. See Note 9 for more information. The estimated fair value of the 2026 Notes, which is classified as Level 2, was determined based on quoted bid prices of the 2026 Notes in an over-the-counter market on the last trading day of the reporting period.

Note 4. Equipment and leasehold improvements

Equipment and leasehold improvements were as follows:

	December 31,	
	2022	2021
	(in thousands)	
Computers	\$ 18,191	\$ 14,629
Software	2,168	1,182
Furniture/fixtures	5,162	4,394
Leasehold improvements	13,769	11,123
Capital in progress	1,558	3,003
Equipment and leasehold improvements, gross	40,848	34,331
Less: accumulated depreciation	(21,427)	(16,286)
Equipment and leasehold improvements, net	<u>\$ 19,421</u>	<u>\$ 18,045</u>

Depreciation expense was \$6.7 million, \$5.8 million, and \$5.2 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Note 5. Acquisitions*ZecOps*

On November 16, 2022, the Company completed its acquisition of ZecOps, a leader in mobile detection and response, pursuant to the terms of the ZecOps Merger Agreement. This acquisition uniquely positions Jamf to help IT and security teams strengthen their organization's mobile security posture.

Under the terms of the ZecOps Merger Agreement, the Company acquired 100% of the equity interest in ZecOps for total purchase consideration of \$44.3 million, subject to certain closing adjustments as set forth in the ZecOps Merger Agreement. The total purchase consideration included cash consideration of \$28.2 million, equity consideration of \$15.1 million (based on the closing price of the Company's common stock on November 16, 2022), and repayment of the \$1.0 million SAFE investment in ZecOps the Company entered into in the third quarter of 2022. The cash consideration included (i) \$0.3 million in cash held back in an escrow fund as partial security for post-closing true-up adjustments and (ii) \$7.2 million in cash held back in an escrow fund as partial security for post-closing indemnification claims with (A) 50% of the then existing escrowed amount to be released 18 months following the closing date and (B) the remaining escrowed amount to be released on March 1, 2025. The cash consideration was funded by the Company's cash on hand. The equity consideration consisted of up to 711,111 shares of the Company's common stock, based on (i) the deemed total equity consideration value under the ZecOps Merger Agreement of \$19.2 million divided by (ii) the agreed upon floor of the Company's stock price of \$27.00 per share. On the closing date, 710,691 shares of the equity consideration were issued to applicable ZecOps equityholders, and 420 shares were issued in a reserve account, subject to the completion of customary shareholder certifications. The reserved shares were subsequently released in January 2023.

Acquisition-related expenses of \$2.4 million for the year ended December 31, 2022 were expensed as incurred. These expenses were recognized as acquisition costs in general and administrative expenses in the consolidated statement of operations.

The final purchase accounting allocations for the ZecOps acquisition will be determined within one year from the acquisition date and depend on a number of factors, including the final valuation of our intangible assets acquired and finalization of income tax effects of the opening balance sheet. The following table summarizes the preliminary allocation of the purchase price to the estimated fair values of the assets acquired and liabilities assumed (in thousands):

Assets acquired:	
Cash and cash equivalents	\$ 820
Trade accounts receivable, net	448
Prepaid expenses	39
Other current assets	2,260
Intangible assets acquired	9,500
Operating lease assets	104
Liabilities assumed:	
Accounts payable	(73)
Accrued liabilities	(2,260)
Income taxes payable	(48)
Deferred revenue	(1,014)
Operating lease liabilities	(85)
Deferred tax liability	(529)
Goodwill	35,119
Total purchase consideration	<u>\$ 44,281</u>

The Company accounted for the acquisition by applying the acquisition method of accounting for business combinations in accordance with ASC 805. The allocation of the purchase price required management to make significant

estimates in determining the fair value of assets acquired and liabilities assumed, especially with respect to intangible assets. These estimates included, but were not limited to:

- future expected cash flows from subscription contracts and acquired developed technologies;
- time to recreate customer relationships and anticipated growth in revenue;
- research and development costs;
- obsolescence curves and other useful life assumptions, such as the period of time and intended use of acquired intangible assets in the Company's product offerings;
- discount rates; and
- tax-related valuation allowances.

The goodwill represents the excess of the purchase consideration over the fair value of the underlying net identifiable assets. The goodwill recognized in this acquisition is primarily attributable to expected synergies in sales opportunities across complementary products, customers, and geographies and cross-selling opportunities. The goodwill is not deductible for income tax purposes.

The estimated useful lives and fair values of the identifiable intangible assets acquired were as follows:

	Useful Life	Gross Value (in thousands)
Developed technology	5.0 years	\$ 5,900
Customer relationships	5.0 years	2,300
Non-competes	3.0 years	1,300
Total identifiable intangible assets		<u>\$ 9,500</u>

The weighted-average useful life of the intangible assets acquired was 4.7 years.

Developed technology represents the estimated fair value of the features underlying the ZecOps products as well as the platform supporting ZecOps customers and was valued using an excess earnings income approach. Customer relationships represent the estimated fair value of the underlying relationships with ZecOps customers and were valued using a replacement cost method, which estimates the cost to recreate the asset. Non-competes represent the estimated fair value of non-compete agreements acquired from ZecOps and were valued using a with-and-without income approach.

Pro forma results of operations for this acquisition were not presented as the effects were not material to our financial results.

Other

During the first quarter of 2022, the Company completed two acquisitions to expand our products and services offerings. These acquisitions were not significant individually or in the aggregate to our consolidated financial statements. The combined purchase price for these acquisitions was \$4.0 million, which was paid with cash on hand. The purchase price was allocated to the assets acquired based on their estimated fair values as of the date of each acquisition. The allocation included \$0.9 million to developed technology with an estimated useful life of 5.0 years and \$0.1 million to other assets, with the remaining \$3.0 million allocated to goodwill. The goodwill is not deductible for income tax purposes. Acquisition-related expenses of \$0.4 million were expensed as incurred. These expenses were recognized as acquisition costs in general and administrative expenses in the consolidated statement of operations.

Wandera

On July 1, 2021, the Company completed its acquisition of Wandera. Wandera is a leader in zero trust cloud security and access for mobile devices. As an Apple-first provider of unified cloud security, Wandera expanded the Company's security

offering for the enterprise. Building on the Company's existing capabilities, Wandera added ZTNA, MTD, and data policy features to ensure mobile workers can simply and safely access the network resources they need while complying with organizational policies and reducing mobile charges. This acquisition uniquely positioned the Company to help IT and security teams confidently protect the devices, data, and applications used by a mobile workforce, while extending the intended Apple experience through the Company's robust and scalable Apple Enterprise Management platform.

Under the terms of the Wandera Merger Agreement, the Company acquired 100% of the voting equity interest in Wandera and paid total cash consideration of \$409.3 million. The total consideration consisted of an initial payment of \$359.3 million at close and deferred consideration of \$50.0 million that was paid in \$25.0 million increments on October 1, 2021 and December 15, 2021. The initial payment of \$359.3 million included \$0.7 million held back as partial security for post-closing true-up adjustments as well as indemnification claims made within one year of the acquisition date. The amount held back was released in the fourth quarter of 2021. The acquisition was initially financed with cash on hand and borrowings under the 2021 Term Loan Facility.

Acquisition-related costs were expensed as incurred and were as follows:

	Year Ended December 31, 2021
	(in thousands)
Cost of revenue:	
Subscription	\$ 88
Sales and marketing	180
Research and development	1,088
General and administrative	4,896
	<u>\$ 6,252</u>

The allocation of the purchase price required management to make significant estimates in determining the fair value of assets acquired and liabilities assumed, especially with respect to intangible assets. These estimates included, but were not limited to:

- future expected cash flows from subscription contracts and acquired developed technologies;
- historical and expected customer attrition rates and anticipated growth in revenue;
- royalty rates applied to acquired developed technology platforms;
- obsolescence curves and other useful life assumptions, such as the period of time and intended use of acquired intangible assets in the Company's product offerings;
- discount rates; and
- uncertain tax positions and tax-related valuation allowances.

During the second quarter of 2022, the Company finalized its purchase accounting for the Wandera acquisition. The following table summarizes the final allocation of the purchase price to the estimated fair values of the assets acquired and liabilities assumed and reflects all measurement period adjustments (in thousands):

Assets acquired:	
Cash and cash equivalents	\$ 9,605
Trade accounts receivable, net	3,882
Prepaid expenses	900
Other current assets	426
Equipment and leasehold improvements, net	58
Intangible assets acquired	102,050
Operating lease assets	1,474
Deferred tax asset	918
Liabilities assumed:	
Accounts payable	(788)
Accrued liabilities	(3,464)
Income taxes payable	(94)
Deferred revenue	(5,200)
Operating lease liabilities	(1,474)
Deferred tax liability	(9,374)
Goodwill	310,356
Total purchase consideration	<u>\$ 409,275</u>

During the fourth quarter of 2021, the Company recorded measurement period adjustments including an increase to other current assets of \$0.4 million and an increase to deferred tax assets of \$0.1 million, resulting in a decrease to goodwill of \$0.5 million. The adjustments related to new information obtained about facts and circumstances that existed as of the acquisition date. The increase to other current assets relates to UK refundable research and development tax credits.

The goodwill represents the excess of the purchase consideration over the fair value of the underlying net identifiable assets. The goodwill recognized in this acquisition is primarily attributable to expected synergies in sales opportunities across complementary products, customers, and geographies and cross-selling opportunities. The goodwill is not deductible for income tax purposes.

The estimated useful lives and fair values of the identifiable intangible assets acquired were as follows:

	Useful Life	Gross Value (in thousands)
Developed technology	6.5 years	\$ 60,500
Customer relationships	11.0 years	35,600
Order backlog	2.5 years	3,800
Non-competes	2.5 years	1,750
Trademarks	3.0 years	400
Total identifiable intangible assets		<u>\$ 102,050</u>

The weighted-average useful life of the intangible assets acquired is 7.8 years.

Developed technology represents the estimated fair value of the features underlying the Wandera products as well as the platform supporting Wandera customers. Customer relationships represent the estimated fair value of the underlying relationships with Wandera customers. Order backlog represents the estimated fair value of existing order backlog with Wandera customers. Non-competes represent the estimated fair value of non-compete agreements acquired from Wandera. Trademarks represent the estimated fair value of the Wandera brand.

Wandera contributed revenue and net loss of \$10.6 million and \$11.3 million, respectively, from the acquisition date through December 31, 2021, excluding the effects of the acquisition and integration costs.

The following unaudited pro forma information presents the combined results of Jamf and Wandera assuming the acquisition was completed on January 1, 2020. As required by ASC 805, these unaudited pro forma results are presented for informational purposes only and are not necessarily indicative of what the actual results of operations of the combined companies would have been had the acquisition occurred at the beginning of the period presented, nor are they indicative of future results of operations. The pro forma results below have been adjusted for the amortization of acquired intangibles, reduction of deferred revenue, deferred commissions, stock-based compensation expense, and additional interest expense. The pro forma results for the year ended December 31, 2021 have also been adjusted to exclude the impact of \$6.3 million of acquisition-related costs (pre-tax) incurred by the Company that are directly attributable to the transaction. The adjustments do not reflect the effect of costs or synergies that would have been expected to result from the integration of the acquisition.

Pro forma consolidated revenues and net loss for the years ended December 31, 2021 and 2020, calculated as if Wandera had been acquired as of January 1, 2020, were as follows:

	Years Ended December 31,	
	2021	2020
	(in thousands)	
Revenues	\$ 377,996	\$ 288,666
Net loss	(83,383)	(44,671)

cmdReporter

On February 26, 2021, the Company entered into an asset purchase agreement with cmdSecurity to acquire certain cmdSecurity assets, including cmdReporter, a suite of security and compliance tools purpose-built for macOS. The final aggregate purchase price was approximately \$3.4 million, which consisted of cash consideration of \$3.0 million and contingent consideration of \$0.4 million. The purchase price was allocated to the assets acquired based on their estimated fair values as of the date of the acquisition. The allocation included \$2.6 million to developed technology with an estimated useful life of 5.0 years and \$0.4 million to IPR&D, with the remaining \$0.4 million allocated to goodwill. The IPR&D was completed in the first quarter of 2022 and is amortized over its estimated useful life of 5.0 years.

Mondada

On October 15, 2020, the Company purchased all of the outstanding membership interests of Mondada. Mondada's Kinobi patch management solutions integrate with Jamf Pro, allowing organizations to extend Jamf Pro's built-in patch management functionality to include all Mac applications within an environment. The total purchase price was \$2.7 million. The purchase price was allocated to the assets acquired based on their estimated fair values as of the date of the acquisition. The allocation included \$1.0 million to developed technology with an estimated useful life of 5.0 years and \$0.1 million to customer relationships with an estimated useful life of 6.0 years, with the remaining \$1.7 million allocated to goodwill. The goodwill recognized in this acquisition was primarily attributable to the workforce acquired and the expected synergies of integrating Mondada's Kinobi patch management solutions with Jamf Pro. The goodwill is not deductible for income tax purposes.

Digita

In 2019, the Company recorded contingent consideration in connection with its purchase of the outstanding membership interests of Digita. The maximum contingent consideration is \$15.0 million if the acquired business achieves certain revenue milestones by December 31, 2022. The acquired business achieved the minimum revenue milestones, which resulted in the Company making cash payments of \$4.6 million and \$4.2 million in 2022 and 2021, respectively, to the former owners of the acquired business. An additional cash payment of \$6.2 million was made in January 2023. See Note 3 for more information on the fair value of the contingent consideration.

Note 6. Goodwill and other intangible assets

The change in the carrying amount of goodwill was as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Goodwill, beginning of period	\$ 845,734	\$ 541,480	\$ 539,818
Goodwill acquired	38,133	311,203	1,662
Measurement period adjustments ⁽¹⁾	—	(477)	—
Foreign currency translation adjustment	(26,942)	(6,472)	—
Goodwill, end of period	<u>\$ 856,925</u>	<u>\$ 845,734</u>	<u>\$ 541,480</u>

⁽¹⁾ Represents the measurement period adjustments related to the Wandera acquisition. See Note 5 for more information.

The gross carrying amount and accumulated amortization of intangible assets other than goodwill were as follows:

	December 31, 2022				
	Useful Life	Gross Value	Accumulated Amortization	Net Carrying Value	Weighted-Average Remaining Useful Life
	(in thousands)				
Trademarks	3 - 8 years	\$ 34,649	\$ 22,200	\$ 12,449	2.8 years
Customer relationships	2 - 12 years	249,659	96,973	152,686	7.2 years
Developed technology	5 - 6.5 years	116,881	66,373	50,508	4.7 years
Non-competes	2 - 3 years	2,864	1,066	1,798	2.3 years
Order backlog	2.5 years	3,518	2,215	1,303	1.0 year
Total intangible assets		<u>\$ 407,571</u>	<u>\$ 188,827</u>	<u>\$ 218,744</u>	
	December 31, 2021				
	Useful Life	Gross Value	Accumulated Amortization	Net Carrying Value	Weighted-Average Remaining Useful Life
	(in thousands)				
Trademarks	3 - 8 years	\$ 34,690	\$ 17,788	\$ 16,902	3.8 years
Customer relationships	2 - 12 years	249,495	75,600	173,895	8.3 years
Developed technology	5 - 6.5 years	116,193	47,142	69,051	5.1 years
Non-competes	2 - 2.5 years	1,797	439	1,358	2.0 years
Order backlog	2.5 years	3,745	758	2,987	2.0 years
Total intangible assets subject to amortization		405,920	141,727	264,193	
IPR&D	Indefinite	400	—	400	
Total intangible assets		<u>\$ 406,320</u>	<u>\$ 141,727</u>	<u>\$ 264,593</u>	

The gross value in the tables above includes a cumulative foreign currency translation adjustment of \$(11.0) million and \$(2.1) million as of December 31, 2022 and 2021, respectively. The accumulated amortization in the table above includes a cumulative foreign currency translation adjustment of \$(1.0) million as of December 31, 2022. The cumulative foreign currency translation adjustment for accumulated amortization was not material as of December 31, 2021.

Amortization expense was \$48.2 million, \$41.3 million, and \$33.3 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Future estimated amortization expense as of December 31, 2022 is as follows (in thousands):

Years ending December 31:	
2023	\$ 40,059
2024	36,878
2025	35,701
2026	31,000
2027	29,624
Thereafter	45,482
Total amortization expense	<u>\$ 218,744</u>

The amounts in the table above are estimates. The actual amount of amortization expense may differ from the estimated amount due to additional intangible assets acquired, changes in foreign currency exchange rates, impairment of intangible assets, accelerated amortization of intangible assets, and other events.

There were no impairments to goodwill during the years ended December 31, 2022, 2021, and 2020. There were no material impairments to intangible assets during the years ended December 31, 2022, 2021, and 2020.

Note 7. Leases

The Company leases office facilities and vehicles under operating lease agreements that have initial terms ranging from 1 to 9 years. Some leases include one or more options to renew, generally at our sole discretion, with renewal terms that can extend the lease term up to 10 years. In addition, certain leases contain termination options, where the rights to terminate are held by either the Company, the lessor, or both parties. These options to extend or terminate a lease are included in the lease terms when it is reasonably certain that the Company will exercise that option. The Company's leases generally do not contain any material restrictive covenants or residual value guarantees. The Company also leases office equipment under a finance lease agreement with a term of 4 years. The Company's finance lease was not material to the consolidated financial statements as of December 31, 2022 or 2021.

Supplemental balance sheet information related to the Company's operating leases is as follows:

<u>Leases</u>	<u>Balance Sheet Classification</u>	<u>December 31, 2022</u>	<u>December 31, 2021</u>
		(in thousands)	
Assets			
Operating lease assets	Other assets	\$ 23,828	\$ 21,600
Liabilities			
Operating lease liabilities - current	Accrued liabilities	\$ 6,539	\$ 5,251
Operating lease liabilities - non-current	Other liabilities	21,895	20,086
Total operating lease liabilities		<u>\$ 28,434</u>	<u>\$ 25,337</u>

The weighted-average remaining term of the Company's operating leases was 5.2 years and 5.9 years as of December 31, 2022 and 2021, respectively. The weighted-average discount rate used to measure the present value of the operating lease liabilities was 3.9% and 3.5% as of December 31, 2022 and 2021, respectively.

The components of lease expense were as follows:

	Years Ended December 31,	
	2022	2021
	(in thousands)	
Operating lease cost	\$ 6,882	\$ 5,935
Short-term lease cost	281	272
Variable lease cost	2,442	1,943
Total lease expense	<u>\$ 9,605</u>	<u>\$ 8,150</u>

Operating lease cost is recognized on a straight-line basis over the lease term. The Company leases certain office facilities with a related party, including the office space in Eau Claire, Wisconsin. Operating lease cost with related parties was \$1.1 million for both the years ended December 31, 2022 and 2021.

Total lease expense, including the Company's share of the lessors' operating expenses, was \$5.0 million for the year ended December 31, 2020. Lease expense with related parties, including the Company's share of the lessors' operating expenses, was \$1.1 million for the year ended December 31, 2020.

For the years ended December 31, 2022 and 2021, operating cash flows included \$6.4 million and \$5.9 million, respectively, of cash paid for operating lease liabilities.

Maturities of the Company's operating lease liabilities as of December 31, 2022 were as follows:

	Operating Leases (in thousands)
Years ending December 31:	
2023	\$ 7,496
2024	6,405
2025	4,786
2026	4,792
2027	2,727
Thereafter	5,342
Total lease payments	<u>31,548</u>
Less: imputed interest	3,114
Total present value of lease liabilities	<u>\$ 28,434</u>

Note 8. Commitments and contingencies

Hosting Services and Other Support Software Agreements

The Company has various contractual agreements for hosting services and other support software. The below table reflects the minimum payments under these agreements as of December 31, 2022:

	Unrelated (in thousands)
Years ending December 31:	
2023	\$ 37,738
2024	35,039
2025	16,911
2026	—
2027	—
Thereafter	—
	<u>\$ 89,688</u>

As of December 31, 2022, the Company also has a variable obligation of \$17.5 million over the term of a three-year contract for third-party hosting services. The variable obligation is not reflected in the table above.

Leases

See Note 7 for information on the Company's future commitments related to its lease arrangements.

Contingencies

In 2021, the Company was engaged in discussions with an entity regarding the entity's patented technology and allegations regarding the Company's infringement of that technology. During the fourth quarter of 2021, the Company settled

this matter and paid the entity \$5.0 million. The Company recognized the expense within general and administrative expenses during the year ended December 31, 2021.

From time to time, the Company may be subject to various claims, charges, and litigation. The Company records a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. The Company maintains insurance to cover certain actions and believes that resolution of such claims, charges, or litigation will not have a material impact on the Company's financial position, results of operations, or liquidity. The Company had no liabilities for contingencies as of December 31, 2022 or 2021.

Note 9. Debt

The following table summarizes the balances and availability of our 2026 Notes and 2020 Revolving Credit Facility:

	Outstanding ⁽¹⁾		Unutilized Amount		Interest Rate		Maturity Date
	December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021	
	(in thousands)						
2026 Notes	\$ 364,505	\$ 362,031	N/A	N/A	0.125%	0.125%	Sept. 1, 2026
2020 Revolving Credit Facility	1,037	1,037	\$ 148,963	\$ 148,963	1.25%	1.25%	July 27, 2025

⁽¹⁾ Represents the net carrying amount of our 2026 Notes and outstanding letters of credit under the 2020 Revolving Credit Facility.

Convertible Senior Notes

On September 17, 2021, the Company issued \$373.8 million aggregate principal amount of 0.125% 2026 Notes in a private offering. The 2026 Notes were issued pursuant to the 2026 Notes Indenture, dated September 17, 2021, among the Company, JAMF Software, LLC, as subsidiary guarantor, and U.S. Bank National Association, as trustee. The 2026 Notes are general senior, unsecured obligations of the Company and mature on September 1, 2026, unless earlier converted, redeemed, or repurchased. The 2026 Notes bear interest at a rate of 0.125% per year, payable semiannually in arrears on March 1st and September 1st of each year, beginning on March 1, 2022. The Company recorded the principal amount of the 2026 Notes, net of issuance costs, as a liability in the consolidated balance sheet in accordance with ASU 2020-06, which the Company early adopted on January 1, 2021.

The Company's net proceeds from the offering were approximately \$361.4 million after deducting the initial purchasers' discounts and commissions and the offering expenses paid by the Company. The Company used (i) approximately \$250.0 million of the net proceeds from the offering of the 2026 Notes to repay the Company's 2021 Term Loan Facility and to pay any associated prepayment penalties and accrued and unpaid interest to the date of repayment and (ii) approximately \$36.0 million of the net proceeds from the offering of the 2026 Notes to fund the cost of entering into the Capped Calls, and will use the remainder of the net proceeds for general corporate purposes, which may include working capital, capital expenditures, and potential acquisitions and strategic transactions.

The 2026 Notes are convertible at the option of the holders at any time prior to the close of business on the business day immediately preceding March 1, 2026, only under the following circumstances: (1) during any calendar quarter commencing after the calendar quarter ending on December 31, 2021 (and only during such calendar quarter), if the last reported sale price of the Company's common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day; (2) during the five business day period after any ten consecutive trading day period in which the trading price (as defined in the 2026 Notes Indenture) per \$1,000 principal amount of the 2026 Notes for each trading day during the five business day period after any ten consecutive trading day period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate for the 2026 Notes on each such trading day; (3) if the Company calls such 2026 Notes for redemption, at any time prior to the close of business on the scheduled trading day immediately preceding the redemption date, but only with respect to the 2026 Notes called (or deemed called) for redemption; and (4) upon the occurrence of specified corporate events as set forth in the 2026 Notes Indenture. On or after March 1, 2026 until the close of business on the second scheduled trading day immediately preceding the maturity date (September 1, 2026), holders of the 2026 Notes may convert all or any portion of their 2026 Notes at any time, regardless of the foregoing conditions. Upon conversion, the Company may satisfy its conversion obligation by paying or delivering, as the case may be, cash, shares of the Company's common stock, or a combination of cash and shares of

the Company's common stock, at the Company's election, in the manner and subject to the terms and conditions provided in the 2026 Notes Indenture. As of December 31, 2022, the conditions allowing holders of the 2026 Notes to convert were not met.

The initial conversion rate for the 2026 Notes is 20.0024 shares of the Company's common stock per \$1,000 principal amount of 2026 Notes, which is equivalent to an initial conversion price of approximately \$49.99 per share of common stock. The initial conversion price of the 2026 Notes represents a premium of approximately 40.0% to the last reported sale price of the Company's common stock on NASDAQ on September 14, 2021. The conversion rate for the 2026 Notes is subject to adjustment under certain circumstances in accordance with the terms of the 2026 Notes Indenture. In addition, following certain corporate events that occur prior to the maturity date of the 2026 Notes or if the Company delivers a notice of redemption in respect of the 2026 Notes, the Company will, under certain circumstances, increase the conversion rate of the 2026 Notes for a holder who elects to convert its 2026 Notes (or any portion thereof) in connection with such a corporate event or convert its 2026 Notes called (or deemed called) for redemption during the related redemption period (as defined in the 2026 Notes Indenture), as the case may be.

The Company may not redeem the 2026 Notes prior to September 6, 2024. The Company may redeem for cash all or any portion of the 2026 Notes, at its option, on or after September 6, 2024, if the last reported sale price of the common stock has been at least 130% of the conversion price for the 2026 Notes then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which the Company provides notice of redemption at a redemption price equal to 100% of the principal amount of the 2026 Notes to be redeemed, plus accrued and unpaid interest, to, but excluding, the redemption date. If the Company redeems less than all the outstanding 2026 Notes, at least \$50.0 million aggregate principal amount of 2026 Notes must be outstanding and not subject to redemption as of the date of the relevant notice of redemption. No sinking fund is provided for the 2026 Notes.

If the Company undergoes a fundamental change (as defined in the 2026 Notes Indenture), holders may require, subject to certain conditions and exceptions, the Company to repurchase for cash all or any portion of their 2026 Notes at a fundamental change repurchase price equal to 100% of the principal amount of the 2026 Notes to be repurchased, plus accrued and unpaid interest, to, but excluding, the fundamental change repurchase date.

The 2026 Notes Indenture includes customary covenants and sets forth certain events of default after which the 2026 Notes may be declared immediately due and payable and sets forth certain types of bankruptcy or insolvency events of default involving the Company or its significant subsidiaries after which the 2026 Notes become automatically due and payable.

The following table sets forth the interest expense related to the 2026 Notes for the periods presented:

	Years Ended December 31,	
	2022	2021
	(in thousands)	
Contractual interest expense	\$ 467	\$ 135
Amortization of issuance costs	2,474	711

In the third quarter of 2021, the Company recorded debt issuance costs of \$12.4 million related to the issuance of the 2026 Notes as a reduction to the liability in the consolidated balance sheet. Debt issuance costs are amortized to interest expense over the term of the 2026 Notes using the effective interest rate method. The effective interest rate on the 2026 Notes was 0.81% for both the years ended December 31, 2022 and 2021.

Capped Calls

On September 14, 2021, concurrently with the pricing of the 2026 Notes, and on September 17, 2021, concurrently with the initial purchasers' exercise of their option to purchase additional 2026 Notes, the Company also entered into the Capped Calls with third-party banks. The Capped Calls each have an initial strike price of approximately \$49.99 per share, subject to certain adjustments, which corresponds to the initial conversion price of the 2026 Notes. The Capped Calls have initial cap prices of \$71.42 per share, subject to certain adjustments. The Capped Calls cover, subject to anti-dilution adjustments, approximately 7.5 million shares of the Company's common stock. The Capped Calls are generally intended to reduce or offset the potential dilution to the common stock upon any conversion of the 2026 Notes with such reduction or offset, as the case may be, subject to a cap based on the cap price. The Company paid approximately \$36.0 million from the net proceeds from the issuance and sale of the 2026 Notes to purchase the Capped Calls and recorded the Capped Calls as a reduction to additional paid-in capital in the consolidated balance sheet. The Capped Calls are subject to either adjustment or

termination upon the occurrence of specified extraordinary events affecting the Company, including a merger event, a tender offer, and a nationalization, insolvency or delisting involving the Company. In addition, the Capped Calls are subject to certain specified additional disruption events that may give rise to terminations of the Capped Calls, including changes in law, failures to deliver, and hedging disruptions.

Credit Agreement

The 2020 Credit Agreement provides for the 2020 Revolving Credit Facility of \$150.0 million, which may be increased or decreased under specific circumstances, with a \$25.0 million letter of credit sublimit and a \$50.0 million alternative currency sublimit. In addition, the 2020 Credit Agreement provides for the ability of the Company to request incremental term loan facilities, in a minimum amount of \$5.0 million for each facility. The maturity date of the 2020 Credit Agreement is July 27, 2025. The 2020 Credit Agreement contains customary representations and warranties, affirmative covenants, reporting obligations, negative covenants, and events of default. We were in compliance with such covenants as of both December 31, 2022 and 2021. As of both December 31, 2022 and 2021, we had \$1.0 million of letters of credit outstanding under our 2020 Revolving Credit Facility.

In connection with the closing of the Wandera acquisition on July 1, 2021, the Company entered into the Credit Agreement Amendment, which amended the Company's 2020 Credit Agreement. The Credit Agreement Amendment provided for the 2021 Term Loan Facility, a new 364-day term loan facility in an aggregate principal amount of \$250.0 million on substantially the same terms and conditions as the Company's existing 2020 Revolving Credit Facility. The Company repaid the principal amount of the 2021 Term Loan Facility on September 23, 2021 with proceeds from the issuance and sale of the 2026 Notes. The Company accounted for this transaction as a debt extinguishment and recorded debt extinguishment costs of \$0.4 million for the write-off of remaining debt issuance costs.

In the third quarter of 2020, the Company recorded debt issuance costs of \$1.3 million related to the 2020 Credit Agreement. In the second quarter of 2021, the Company recorded debt issuance costs of \$0.7 million related to the Credit Agreement Amendment. As of December 31, 2022 and 2021, debt issuance costs related to the 2020 Credit Agreement of \$0.7 million and \$0.9 million, respectively, are included in other assets in the consolidated balance sheets.

The interest rates applicable to revolving borrowings under the 2020 Credit Agreement are, at the Company's option, either (i) a base rate, which is equal to the greater of (a) the Prime Rate, (b) the Federal Funds Effective Rate plus 0.50%, and (c) the Adjusted LIBO Rate (subject to a floor) for a one month interest period (each term as defined in the 2020 Credit Agreement) plus 1.00%, or (ii) the Adjusted LIBO Rate (subject to a floor) equal to the LIBO Rate for the applicable interest period multiplied by the Statutory Reserve Rate, plus in the case of each of clauses (i) and (ii), the Applicable Rate. The Applicable Rate (i) for base rate loans range from 0.25% to 1.00% per annum and (ii) for LIBO Rate loans range from 1.25% to 2.00% per annum, in each case, based on the Senior Secured Net Leverage Ratio (as such term is defined in the 2020 Credit Agreement). Base rate borrowings may only be made in dollars. The Company pays a commitment fee during the term of the 2020 Credit Agreement ranging from 0.20% to 0.35% per annum of the average daily undrawn portion of the revolving commitments based on the Senior Secured Net Leverage Ratio. For the years ended December 31, 2022, 2021, and 2020, the Company accrued \$0.3 million, \$0.3 million, and \$0.1 million, respectively, for the commitment fee.

On November 13, 2017, the Company entered into the 2017 Credit Agreement. The 2017 Credit Agreement provided for the 2017 Term Loan Facility of \$175.0 million with a maturity date of November 13, 2022 and the 2017 Revolving Credit Facility of \$15.0 million with a maturity date of November 13, 2022. On January 30, 2019, the Company entered into a First Amended Credit Agreement, which increased the 2017 Term Loan Facility to \$205.0 million. The First Amended Credit Agreement provided for additional funding for the ZuluDesk acquisition. On April 13, 2019, the Company entered into a Second Amended Credit Agreement, which adjusted the rate for both the 2017 Term Loans and 2017 Credit Facilities. Upon the closing of our IPO, the Company repaid the 2017 Credit Agreement. See Note 1 for more information.

Note 10. Share-based compensation

The Company's equity incentive plans provide for granting various share-based awards to eligible employees, non-employee directors, and consultants of the Company. In addition, the Company offers an employee stock purchase plan to eligible employees.

The Company recognized stock-based compensation expense for all equity arrangements as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Cost of revenue:			
Subscription	\$ 8,854	\$ 3,755	\$ 732
Services	1,299	594	139
Sales and marketing	33,559	10,938	1,748
Research and development	24,392	10,512	1,533
General and administrative	41,066	10,006	2,591
	<u>\$ 109,170</u>	<u>\$ 35,805</u>	<u>\$ 6,743</u>

The Company recognized a tax benefit related to stock-based compensation of \$10.1 million, \$12.8 million, and \$3.8 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Equity Incentive Plans

On July 21, 2020, the Company adopted the 2020 Plan. The 2020 Plan provides for grants of (i) stock options, (ii) stock appreciation rights, (iii) restricted shares, (iv) performance awards, (v) other share-based awards, and (vi) other cash-based awards to eligible employees, non-employee directors, and consultants of the Company. We initially reserved 14,800,000 shares of our common stock for issuance under the 2020 Plan. The total number of shares reserved for issuance under the 2020 Plan increases on January 1st of each of the first 10 calendar years during the term of the 2020 Plan by the lesser of: (i) a number of shares of our common stock equal to 4% of the total number of shares of our common stock outstanding on December 31st of the preceding calendar year or (ii) a number of shares of our common stock as determined by our Board. The maximum number of shares of common stock available for issuance under the 2020 Plan was 24,256,740 shares as of January 1, 2022. As of December 31, 2022, 13,413,731 shares of common stock are reserved for additional grants under the 2020 Plan.

The 2017 Option Plan became effective November 13, 2017 upon the approval of the Board and, prior to the adoption of the 2020 Plan, served as the umbrella plan for the Company's stock-based and cash-based incentive compensation program for its officers and other eligible employees. The aggregate number of shares of common stock that may be issued under the 2017 Option Plan may not exceed 8,470,000 shares. As of December 31, 2022, 128,928 shares of common stock are reserved for additional grants under the 2017 Option Plan. All stock options previously granted by the Company were at an exercise price at or above the estimated fair market value of the Company's common stock as of the grant date.

Return Target Options

The table below summarizes return target option activity for the year ended December 31, 2022:

	Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (in thousands)
Outstanding, December 31, 2021	3,687,664	\$ 6.75	6.8	\$ 115,278
Granted	—	—		
Exercised	(414,744)	6.75		
Forfeitures	—	—		
Outstanding, December 31, 2022	<u>3,272,920</u>	\$ 6.75	5.8	\$ 47,623
Options exercisable at December 31, 2022	3,272,920	\$ 6.75	5.8	\$ 47,623
Vested or expected to vest at December 31, 2022	3,272,920	\$ 6.75	5.8	\$ 47,623

The aggregate intrinsic value in the table above represents the total intrinsic value that would have been received by the optionholders had all optionholders exercised their options on the last day of the period. No return target options were granted during the years ended December 31, 2022, 2021, and 2020. The return target options outstanding on June 27, 2022 were modified such that these options were deemed fully vested as of June 30, 2022. During the three months ended June 30, 2022, with the filing of a Form S-3 “shelf” registration statement, the market condition and the implied performance obligation were deemed to be satisfied and the Company recognized \$33.0 million of stock-based compensation expense. See Note 2 for further information. There is no remaining unrecognized compensation expense related to these return target options as of December 31, 2022. The total fair value of return target options vested during the year ended December 31, 2022 was \$33.0 million. The aggregate intrinsic value of the options exercised, which represents the difference between the fair market value of the Company’s common stock on the date of exercise and the exercise price of each option, was \$7.9 million for the year ended December 31, 2022. No return target options vested or were exercised during the years ended December 31, 2021 and 2020. The Company issues new shares when return target options are exercised.

Service-Based Options

The table below summarizes the service-based option activity for the year ended December 31, 2022:

	Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (in thousands)
Outstanding, December 31, 2021	1,643,266	\$ 5.68	6.1	\$ 53,129
Granted	—	—		
Exercised	(427,444)	5.62		
Forfeitures	—	—		
Outstanding, December 31, 2022	<u>1,215,822</u>	\$ 5.70	5.1	\$ 18,968
Options exercisable at December 31, 2022	1,162,656	\$ 5.58	5.0	\$ 18,272
Vested or expected to vest at December 31, 2022	1,215,822	\$ 5.70	5.1	\$ 18,968

The aggregate intrinsic value in the table above represents the total intrinsic value that would have been received by the optionholders had all optionholders exercised their options on the last date of the period. Service-based options vest over four years with 25% vesting one year after grant and the remainder vesting ratably on a quarterly basis thereafter. The Company issues new shares when service-based options are exercised. All service-based options outstanding under the Company’s option plans have exercise prices equal to the fair value of the Company’s stock on the grant date. All awards expire after 10 years.

No service-based options were granted during the years ended December 31, 2022, 2021, and 2020. The aggregate intrinsic value of the options exercised, which represents the difference between the fair market value of the Company’s common stock on the date of exercise and the exercise price of each option, was \$11.2 million, \$54.7 million, and \$13.9 million for the years ended December 31, 2022, 2021, and 2020, respectively. The total fair value of service-based options vested

during the years ended December 31, 2022, 2021, and 2020 was \$0.7 million, \$2.6 million, and \$2.6 million, respectively. There was \$0.3 million of unrecognized compensation expense related to service-based options that is expected to be recognized over a weighted-average period of 0.9 years as of December 31, 2022.

Restricted Stock Units

RSU activity for the year ended December 31, 2022 was as follows:

	Units	Weighted-Average Grant Date Fair Value (per share)
Outstanding, December 31, 2021	6,890,938	\$ 31.59
Granted	4,065,117	27.50
Vested	(1,895,620)	31.88
Forfeited	(643,078)	30.67
Outstanding, December 31, 2022	<u>8,417,357</u>	<u>\$ 29.61</u>

RSUs under the 2020 Plan generally vest ratably on an annual basis over four years. RSUs under the 2017 Option Plan vest 100% on the one year anniversary of the date of the grant. The weighted-average grant date fair value of RSUs granted during the years ended December 31, 2022, 2021, and 2020 was \$27.50, \$32.51, and \$26.33, respectively. There was \$216.1 million of unrecognized compensation expense related to unvested RSUs that is expected to be recognized over a weighted-average period of 2.9 years as of December 31, 2022. The total fair value of RSUs vested during the years ended December 31, 2022, 2021, and 2020 was \$60.4 million, \$16.2 million, and \$0.5 million, respectively.

Long-Term Incentive Plan

In the third quarter of 2021, the Company offered employees with LTIP grants the opportunity to convert those awards into RSUs under the 2020 Plan. Upon conversion, 50% of the RSUs vested immediately and the remaining 50% vested on the one year anniversary of the grant date, provided the employee remained continuously employed by the Company through the vesting date. All employees elected to convert their outstanding LTIP grants into RSUs, resulting in grants totaling 413,234 shares.

The conversion of the previously outstanding LTIP grants into RSUs resulted in the recognition of \$4.5 million and \$9.8 million of stock-based compensation expense during the years ended December 31, 2022 and 2021, respectively. The expense on the unvested RSUs was recognized on a straight-line basis over the vesting period.

Employee Stock Purchase Plan

On May 25, 2021, the Company adopted the 2021 ESPP. The 2021 ESPP provides for six-month offering periods beginning May 1st and November 1st of each fiscal year and provides eligible employees the opportunity to purchase shares of the Company's common stock through accumulated payroll deductions at a 15% discount. On each purchase date, the purchase price of the shares is the lesser of (i) 85% of the fair market value of the Company's common stock on the first day of trading of the offering period or (ii) 85% of the fair market value of the Company's common stock on the last day of trading of the offering period. Payroll deductions are limited to 15% of an employee's eligible compensation. The number of shares an employee may purchase during any offering period is limited to an aggregate value of \$25,000 per calendar year based on the stock price on the first day of trading of the offering period. As of December 31, 2022 and 2021, the Company withheld, at the employees' request, \$1.1 million and \$1.2 million, respectively, of eligible employee compensation, which is included in accrued liabilities in the consolidated balance sheet, for purchases of common stock under the 2021 ESPP.

As of December 31, 2022, 3,899,071 shares of common stock were reserved for future issuance under the 2021 ESPP. The total number of shares reserved for issuance under the 2021 ESPP increases on January 1st of each of the first 10 calendar years after the first offering date by a number of shares of our common stock equal to 1% of the total number of shares of our common stock outstanding on December 31st of the preceding calendar year. The aggregate number of shares issued over the term of the 2021 ESPP will not exceed 16,000,000 shares. During the year ended December 31, 2022, the Company's employees purchased 295,189 shares of common stock under the 2021 ESPP at a weighted-average purchase price of \$22.80 per share. Total proceeds to the Company were \$6.8 million during the year ended December 31, 2022. No shares of common stock were issued under the 2021 ESPP during the year ended December 31, 2021.

The grant date fair value of shares issued under the 2021 ESPP equals the sum of (i) 15% of the Company's quoted stock price on the first day of trading of the offering period and (ii) 85% of the fair market value of a stock option using the Black-Scholes option pricing model. The average grant date fair value for the offering periods under the 2021 ESPP that commenced in 2022 was \$8.28 per share. The average grant date fair value for the offering period under the 2021 ESPP that commenced in 2021 was \$11.97 per share. The Company used the following assumptions in the Black-Scholes option pricing model:

	Years Ended December 31,	
	2022	2021
Expected term	0.5 years	0.5 years
Expected volatility	60.05% - 64.90%	40.31%
Risk-free interest rate	1.49% - 4.58%	0.06%
Expected dividend yield	—%	—%

There was \$0.9 million of unrecognized compensation expense related to the 2021 ESPP that is expected to be recognized over a period of four months as of December 31, 2022.

Note 11. Net loss per share

The following table sets forth the computation of basic and diluted net loss per share:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands, except share and per share amounts)		
Numerator:			
Net loss	\$ (141,301)	\$ (75,189)	\$ (24,082)
Denominator:			
Weighted-average shares used to compute net loss per share, basic and diluted	120,720,972	118,276,462	108,908,597
Basic and diluted net loss per share	\$ (1.17)	\$ (0.64)	\$ (0.22)

Basic net loss per share is computed by dividing the net loss by the weighted-average number of common shares outstanding for the period. Because we have reported a net loss for the years ended December 31, 2022, 2021, and 2020, the number of shares used to calculate diluted net loss per common share is the same as the number of shares used to calculate basic net loss per common share given that the potentially dilutive shares would have been antidilutive if included in this calculation.

The following potentially dilutive securities outstanding have been excluded from the computation of diluted weighted-average shares outstanding because such securities have an antidilutive impact due to losses reported:

	As of December 31,		
	2022	2021	2020
Stock options outstanding	4,488,742	5,330,930	7,234,490
Unvested restricted stock units	8,417,357	6,890,938	1,293,107
Shares related to the 2026 Notes	7,475,897	7,475,897	—
Shares committed under the 2021 ESPP	193,977	108,331	—
Total potentially dilutive securities	<u>20,575,973</u>	<u>19,806,096</u>	<u>8,527,597</u>

Note 12. Employee benefit plans

Employees located in the U.S. are generally eligible to participate in the 401(k) Plan. The 401(k) Plan allows eligible employees to defer a percentage of their annual compensation as defined in the 401(k) Plan on a pre-tax or after-tax basis up to the maximum amount allowed by the Internal Revenue Service. The Company contributes an amount equal to 3 percent of each participant's eligible compensation each pay period regardless of whether the participant makes elective deferrals. The Company made contributions to the 401(k) Plan of \$5.4 million, \$4.1 million, and \$3.2 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Employees outside of the U.S. who are not covered by the 401(k) Plan may be covered by local defined contribution plans, which are subject to applicable laws and rules of the country where the plans are administered. The Company made contributions to defined contributions plans outside of the U.S. of \$2.5 million, \$1.5 million, and \$0.4 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Note 13. Income taxes

The domestic and foreign components of loss before income tax benefit were as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Domestic	\$ (123,521)	\$ (71,537)	\$ (34,829)
Foreign	(18,693)	(8,441)	792
Loss before income tax benefit	<u>\$ (142,214)</u>	<u>\$ (79,978)</u>	<u>\$ (34,037)</u>

The components of income tax expense (benefit) attributable to continuing operations were as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Current:			
Federal	\$ (6)	\$ —	\$ (551)
State	154	217	(73)
Foreign	1,894	638	987
Total current expense	<u>2,042</u>	<u>855</u>	<u>363</u>
Deferred:			
Federal	(268)	(487)	(10,657)
State	(170)	(1,145)	(1,173)
Foreign	(2,517)	(4,012)	1,512
Total deferred benefit	<u>(2,955)</u>	<u>(5,644)</u>	<u>(10,318)</u>
Total income tax benefit	<u>\$ (913)</u>	<u>\$ (4,789)</u>	<u>\$ (9,955)</u>

The income tax benefit differs from the amount of income tax benefit determined by applying the statutory U.S. federal income tax rate to pretax loss due to the following:

	Years Ended December 31,		
	2022	2021	2020
Statutory U.S. federal income tax rate	21.0%	21.0%	21.0%
State income tax benefit, net of federal tax effect	2.5	3.1	4.7
Permanent differences	0.1	—	(0.7)
Foreign rate differential	(0.6)	(0.5)	(0.5)
Remeasurement gain/loss	—	0.7	(2.0)
Tax credits	2.0	2.3	3.4
Valuation allowance	(21.5)	(24.4)	(2.3)
Stock-based compensation	(1.6)	12.2	6.9
Transaction costs	(0.4)	(0.8)	(0.5)
Deferred rate change	0.4	0.9	(1.0)
Section 162(m)	(1.9)	(9.4)	—
Foreign withholding taxes	(0.5)	—	—
Other	1.1	0.9	0.2
Effective tax rate	<u>0.6%</u>	<u>6.0%</u>	<u>29.2%</u>

Significant components of the Company's deferred income tax assets and liabilities were as follows:

	December 31,	
	2022	2021
	(in thousands)	
Deferred tax assets:		
Accrued compensation	\$ 3,821	\$ 4,529
Deferred revenue	12,883	8,331
Section 174 capitalization	9,540	—
Stock-based compensation	14,960	5,026
Federal tax credits	8,949	6,668
Foreign withholding taxes	2,782	—
Net operating losses	50,794	46,173
State tax credits	2,495	2,086
Business interest limitation	10,054	10,450
Operating lease liabilities	4,347	4,848
2026 Notes	6,627	8,304
Other	3,842	3,267
Gross deferred tax assets	<u>131,094</u>	<u>99,682</u>
Valuation allowance	<u>(63,541)</u>	<u>(31,512)</u>
Total deferred tax assets	<u>67,553</u>	<u>68,170</u>
Deferred tax liabilities:		
Deferred contract costs	(14,170)	(10,491)
Operating lease right-of-use assets	(3,520)	(4,047)
Intangibles and other	(50,578)	(59,670)
Other	(300)	(1,191)
Gross deferred tax liabilities	<u>(68,568)</u>	<u>(75,399)</u>
Net deferred tax liabilities	<u>\$ (1,015)</u>	<u>\$ (7,229)</u>

The components giving rise to the net deferred tax liabilities detailed above have been included in the consolidated balance sheets as follows:

	December 31,	
	2022	2021
	(in thousands)	
Non-current deferred tax assets ⁽¹⁾	\$ 4,490	\$ 1,471
Non-current deferred tax liabilities	(5,505)	(8,700)
Net deferred tax liabilities	<u>\$ (1,015)</u>	<u>\$ (7,229)</u>

⁽¹⁾ Included in other assets in the consolidated balance sheets.

As of December 31, 2022 and 2021, the Company established a valuation allowance against certain deferred tax assets in the U.S. and UK to reduce the total to an amount management believes are more likely than not to be realized. Realization of deferred tax assets is dependent upon sufficient future taxable income during the periods when deductible temporary differences and carryforwards are expected to be available to reduce taxable income. The valuation allowance increased by \$32.0 million, \$28.5 million, and \$0.9 million during the years ended December 31, 2022, 2021, and 2020, respectively.

As of December 31, 2022, the Company had a U.S. federal NOL carryforward of approximately \$141.9 million, a foreign NOL carryforward of approximately \$59.7 million, federal research and development credits of approximately \$8.0 million, and foreign tax credits of approximately \$1.9 million primarily consisting of investment tax credit carryforwards. The Company also had state NOL carryforwards of approximately \$93.3 million and state credits for research and development of approximately \$3.5 million. Approximately \$87.7 million of the federal NOL carryforwards will begin to expire in 2037. The remainder of the federal NOLs of \$54.2 million and the foreign NOLs are carried forward indefinitely. The state NOL carryforwards began expiring in 2022 and are available to offset future taxable income or reduce taxes payable through 2042. The federal research and development credits, state research and development credits, and foreign tax credits will begin

expiring in 2033, 2026, and 2023, respectively. The Company also had a foreign withholding tax carryforward of approximately \$2.8 million.

The Company has not provided for deferred taxes on outside basis differences for investments in its international subsidiaries that are unrelated to unremitted earnings as these basis differences will be indefinitely reinvested. A determination of the unrecognized deferred taxes related to these other components of outstanding basis difference is not practicable to calculate.

A company's ability to utilize a portion of its NOL carryforwards to offset future taxable income may be subject to certain limitations under Section 382 of the Code due to changes in the equity ownership of the Company. The Company conducted a Section 382 analysis and determined that although an ownership change occurred in a prior period, all NOLs will be fully available for utilization before expiration.

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits was as follows:

	Years Ended December 31,		
	2022	2021	2020
	(in thousands)		
Balance, January 1	\$ 1,003	\$ 670	\$ 540
Additions based on tax positions related to the current year	230	161	130
Additions based on tax positions related to prior years	39	172	—
Balance, December 31	<u>\$ 1,272</u>	<u>\$ 1,003</u>	<u>\$ 670</u>

Under the provision for uncertainty in income taxes, the total gross amount of unrecognized tax benefit as of December 31, 2022 was approximately \$1.4 million. At December 31, 2022, the realization of unrecognized tax benefits was not expected to impact the effective rate due to a full valuation allowance on federal and state deferred taxes.

The Company files income tax returns in the U.S. federal jurisdiction, Minnesota, the UK, and various other state and foreign jurisdictions. With few exceptions, the Company is not subject to U.S. federal, foreign, state, and local income tax examinations by tax authorities for years before 2019. It is difficult to predict the final timing and resolution of any particular uncertain tax position. Based on the Company's assessment of many factors, including past experience and complex judgements about future events, the Company does not currently anticipate significant changes in its uncertain tax positions over the next 12 months.

The Company recognizes interest and penalties accrued related to unrecognized tax benefits as additional income tax expense. The Company did not recognize material income tax expense related to interest and penalties during the years ended December 31, 2022, 2021, and 2020.

On March 27, 2020, the CARES Act was signed into law. The most significant relief measure which the Company qualified for was the payroll tax deferral. Beginning with pay dates on and after April 17, 2020, the Company elected to defer the employer-paid portion of social security taxes, resulting in an accrual of \$3.8 million as of December 31, 2020. The Company paid \$1.9 million of the deferred portion of payroll taxes in the fourth quarter of 2021 and the remaining \$1.9 million of the deferred portion of payroll taxes in the fourth quarter of 2022.

Note 14. Related party transactions

The Company made pledges to the JNGF of \$1.1 million, \$1.2 million, and \$0.5 million for the years ended December 31, 2022, 2021, and 2020, respectively. As of December 31, 2022 and 2021, the Company accrued \$1.3 million and \$1.5 million, respectively, related to JNGF pledges, which are included in accrued liabilities in the consolidated balance sheets. The Company has an ongoing lease agreement for office space in Eau Claire, Wisconsin with an entity in which a related party is a minority owner. See Note 7 for further discussion of this lease agreement. The Company may engage in transactions in the ordinary course of business with significant shareholders or other companies whose directors or officers may also serve as directors or officers for the Company. The Company carries out these transactions on customary terms.

Vista is a U.S.-based investment firm that controls the funds which previously owned a majority of the Company. In 2021, Vista sold a portion of its investment in the Company such that its funds no longer owned a majority of the Company as of December 31, 2022. However, Vista is deemed a related party in accordance with ASC 850 as it continues to be a principal

owner of the Company. Except as discussed below, there were no material transactions with Vista or its affiliates during the years ended December 31, 2022, 2021, and 2020.

During the year ended December 31, 2020, affiliates of Vista were paid \$2.1 million in interest on the portion of the 2017 Term Loan Facility held by them.

Note 15. Condensed financial information (Parent Company only)

**Jamf Holding Corp.
(Parent Company only)
Condensed Balance Sheets
(in thousands, except share and per share amounts)**

	December 31,	
	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ —	\$ —
Total current assets	—	—
Investment in subsidiaries	701,338	738,426
Total assets	<u>\$ 701,338</u>	<u>\$ 738,426</u>
Liabilities and stockholders' equity		
Current liabilities:		
Current liabilities	\$ —	\$ —
Total current liabilities	—	—
Other liabilities	—	—
Total liabilities	—	—
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, \$0.001 par value, 50,000,000 shares authorized at December 31, 2022 and 2021; no shares issued and outstanding at December 31, 2022 and 2021	—	—
Common stock, \$0.001 par value, 500,000,000 shares authorized at December 31, 2022 and 2021; 123,170,172 and 119,426,064 shares issued and outstanding at December 31, 2022 and 2021, respectively	123	119
Additional paid-in capital	1,049,875	913,581
Accumulated other comprehensive loss	(39,951)	(7,866)
Accumulated deficit	(308,709)	(167,408)
Total stockholders' equity	<u>701,338</u>	<u>738,426</u>
Total liabilities and stockholders' equity	<u>\$ 701,338</u>	<u>\$ 738,426</u>

Jamf Holding Corp.
(Parent Company only)
Condensed Statements of Operations
(in thousands)

	Years Ended December 31,		
	2022	2021	2020
Revenue	\$ —	\$ —	\$ —
Operating expenses	—	—	—
Loss from operations	—	—	—
Other income, net	—	—	—
Loss before income tax benefit and equity in net loss of subsidiaries	—	—	—
Income tax benefit	—	—	—
Equity in net loss of subsidiaries	(141,301)	(75,189)	(24,082)
Net loss	<u>\$ (141,301)</u>	<u>\$ (75,189)</u>	<u>\$ (24,082)</u>

Jamf Holding Corp.
(Parent Company only)
Condensed Statements of Comprehensive Loss
(in thousands)

	Years Ended December 31,		
	2022	2021	2020
Net loss	\$ (141,301)	\$ (75,189)	\$ (24,082)
Other comprehensive loss:			
Subsidiaries' other comprehensive loss	(32,085)	(7,866)	—
Total other comprehensive loss	(32,085)	(7,866)	—
Comprehensive loss	<u>\$ (173,386)</u>	<u>\$ (83,055)</u>	<u>\$ (24,082)</u>

Basis of presentation

Jamf Holding Corp. is a holding company with no material operations of its own that conducts substantially all of its activities through its subsidiaries. Jamf Holding Corp. has no direct outstanding debt obligations. However, JAMF Holdings Inc., a wholly owned subsidiary, as borrower under the 2020 Credit Agreement, is limited in its ability to declare dividends or make any payment on account of its capital stock to, directly or indirectly, fund a dividend or other distribution to Jamf Holding Corp., subject to limited exceptions, including (1) stock repurchases, (2) unlimited amounts subject to compliance with a 6.0 to 1.0 total leverage ratio giving pro forma effect to any distribution, (3) amounts not to exceed the greater of (i) \$20 million and (ii) 20% of EBITDA in any reference period, and (4) payment of Jamf Holding Corp.'s overhead expenses. Due to the aforementioned qualitative restrictions, substantially all of the assets of Jamf Holding Corp.'s subsidiaries are restricted. For a discussion of the 2020 Credit Agreement, see Note 9.

These condensed financial statements have been presented on a "parent-only" basis. Under a parent-only presentation, Jamf Holding Corp.'s investment in subsidiaries is presented under the equity method of accounting. A condensed statement of cash flows was not presented because Jamf Holding Corp. has no material operating, investing, or financing cash flow activities for the years ended December 31, 2022, 2021, and 2020. Certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted. As such, these parent-only statements should be read in conjunction with the accompanying notes to the consolidated financial statements.

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 maintain “disclosure controls and procedures,” as defined in Rule 13a–15(e) and Rule 15d–15(e) under the Exchange Act that are designed to provide reasonable assurance that information required to be disclosed by the Company 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 SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to provide reasonable assurance that information required to be disclosed by the Company in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2022. Based on this evaluation, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were not effective as of December 31, 2022 due to the material weakness described below. Notwithstanding such material weakness in internal control over financial reporting, our principal executive officer and principal financial officer have concluded that our Consolidated Financial Statements included in this Annual Report on Form 10-K present fairly, in all material respects, our financial position, results of operations, and cash flows for the periods presented in conformity with GAAP.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a–15(f) of the Exchange Act. Our internal control over financial reporting includes policies and procedures designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with GAAP. 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 criteria established in the Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this evaluation, our management concluded that our internal control over financial reporting was not effective as of December 31, 2022 due to the material weakness described below.

The Company completed its acquisition of ZecOps on November 16, 2022. In accordance with guidance issued by the SEC, management excluded ZecOps from its assessment of the effectiveness of the Company’s internal control over financial reporting as of December 31, 2022. ZecOps’s assets represented approximately 3% of the Company’s consolidated total assets as of December 31, 2022.

Our independent registered public accounting firm, Ernst & Young LLP, has issued an audit report with respect to our internal control over financial reporting, which appears in Part II, Item 8 of this Annual Report on Form 10-K.

Material Weakness in Internal Control over Financial Reporting

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company’s annual or interim financial statements will not be prevented or detected on a timely basis. Because the control deficiency described below could have resulted in a material misstatement of our annual or interim financial statements, we determined that this deficiency constitutes a material weakness.

During the fourth quarter of 2022, we identified that we did not design and maintain effective IT general controls for financial IT applications used for revenue recognition by Wandera, which we acquired in July 2021. Specifically, we did not design and maintain access controls relating to maintaining appropriate segregation of duties and user access as well as controls relating to change management over IT program and data changes. We have concluded that process-level automated and manual controls which were dependent upon IT general controls and data derived from impacted IT systems were ineffective because they could have been adversely impacted. Wandera accounts for less than 5% of our consolidated total revenue, and the material weakness did not result in any misstatements to our interim or annual financial statements.

We are working to remediate this material weakness in our internal control over financial reporting. We are in the process of implementing and testing new controls over the financial IT applications used by Wandera. These controls include authorization of changes to financial IT applications and enhanced user access controls to ensure appropriate segregation of duties. The material weakness will not be considered remediated until a sustained period of time has passed to allow management to test the design and operational effectiveness of the new controls.

Remediation of Previously Reported Material Weakness

As previously disclosed in Item 4. of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, we were in process of remediating a material weakness in internal control over financial reporting related to a deficiency in the controls over our commissions process. Our management implemented several steps to enhance our internal controls and commissions processes to remediate this material weakness. Our steering committee, anchored by the Chief Financial Officer and Chief Operating Officer, hired a third-party consultant that provided recommendations to standardize and automate our commission processes. Based on these recommendations, we implemented changes in our processes and internal controls in 2022. During the quarter ended December 31, 2022, management completed testing of the design and operational effectiveness of the corrective actions and determined the newly implemented controls were operating effectively and have been operating effectively for a sufficient period to conclude that the previously identified material weakness has been remediated.

Changes in Internal Control

Except for the remediation measures implemented in connection with the material weaknesses described above, there have been no changes in internal control over financial reporting during the quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including our principal executive officer and principal financial officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Item 9B. Other Information

Not applicable.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

Part III.

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item will be set forth in the Proxy Statement, which will be filed with the SEC within 120 days of the fiscal year ended December 31, 2022 and is incorporated in this report by reference.

Code of Ethics

We adopted a Code of Ethics that applies to all of our employees, officers, and directors, including those officers responsible for financial reporting. Our Code of Ethics is available on our website at ir.jamf.com under “Corporate Responsibility.” We intend to disclose any amendments to our Code of Ethics, or any waivers of its requirements, on our website.

Item 11. Executive Compensation

The information required by this item will be set forth in the Proxy Statement, which will be filed no later than 120 days after the end of our fiscal year ended December 31, 2022 and is incorporated in this report by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item will be set forth in the Proxy Statement, which will be filed no later than 120 days after the end of our fiscal year ended December 31, 2022 and is incorporated in this report by reference.

Item 13. Certain Relationships and Related Party Transactions, and Director Independence

The information required by this item will be set forth in the Proxy Statement, which will be filed no later than 120 days after the end of our fiscal year ended December 31, 2022 and is incorporated in this report by reference.

Item 14. Principal Accountant Fees and Services

The information required by this item will be set forth in the Proxy Statement, which will be filed no later than 120 days after the end of our fiscal year ended December 31, 2022 and is incorporated in this report by reference.

Part IV.**Item 15. Exhibits and Financial Statement Schedules**

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

1. Consolidated Financial Statements

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

2. Financial Statement Schedules

Financial statement schedules have been omitted because they are not required, not applicable, or the required information is included in the Consolidated Financial Statements or notes thereto.

3. Exhibits

The following documents are incorporated by reference or are filed with this Annual Report on Form 10-K, in each case as indicated therein.

Exhibit Number	Description
3.1	Second Amended and Restated Certificate of Incorporation of Jamf Holding Corp., dated July 24, 2020 (incorporated by reference to Exhibit 3.1 to the Company’s Form 8-K filed with the SEC on July 27, 2020).
3.2	Amended and Restated Bylaws of Jamf Holding Corp., dated July 24, 2020 (incorporated by reference to the Company’s Exhibit 3.2 to the Company’s Form 8-K filed with the SEC on July 27, 2020).
4.1	Registration Rights Agreement, dated July 24, 2020, by and among the Company and the other signatories party thereto (incorporated by reference to the Company’s Exhibit 4.1 to the Company’s Form 8-K filed with the SEC on July 27, 2020).
4.2	Description of Securities (incorporated by reference to Exhibit 4.2 to the Company’s Annual Report on Form 10-K filed with the SEC on March 4, 2021).
4.3	Indenture, dated September 17, 2021, among Jamf Holding Corp., JAMF Software, LLC and U.S. Bank National Association (incorporated by reference to Exhibit 4.1 to our Current Report on Form 8-K filed with the SEC on September 20, 2021).
4.4	Form of 0.125% Convertible Senior Note due 2026 (included in Exhibit 4.1) (incorporated by reference to Exhibit 4.2 to our Current Report on Form 8-K filed with the SEC on September 20, 2021).
10.1	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.13 to Jamf Holding Corp.’s Registration Statement on Form S-1 filed with the SEC on June 29, 2020).
10.2+	Jamf Holding Corp. Omnibus Incentive Plan (incorporated by reference to Exhibit 10.1 to Jamf Holding Corp.’s Registration Statement on Form S-8 filed with the SEC on July 24, 2020).
10.3+	Form of Stock Option Award Agreement (incorporated by reference to Exhibit 10.9 to the Registrant’s Registration Statement on Form S-1 (No. 333-239535), filed with the SEC on June 29, 2020).
10.4+	Form of Restricted Shares Award Agreement (incorporated by reference to Exhibit 10.10 to the Registrant’s Registration Statement on Form S-1 (No. 333-239535), filed with the SEC on June 29, 2020).
10.5+	Form of Stock Appreciation Rights Award Agreement (incorporated by reference to Exhibit 10.11 to the Registrant’s Registration Statement on Form S-1 (No. 333-239535), filed with the SEC on June 29, 2020).
10.6+	Form of Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.12 to the Registrant’s Registration Statement on Form S-1 (No. 333-239535), filed with the SEC on June 29, 2020).
10.7+	Amended and Restated Jamf Holding Corp 2017 Stock Option Plan (incorporated by reference to Exhibit 10.6 to Jamf Holding Corp.’s Registration Statement on Form S-8 filed with the SEC on July 24, 2020).

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10.8+	Form of Amended and Restated Jamf Holding Corp. Stock Option Plan Grant Agreement (incorporated by reference to Exhibit 10.16 to the Registrant’s Registration Statement on Form S-1 (No. 333-239535), filed with the SEC on June 29, 2020).
10.9	Credit Agreement, dated as of July 27, 2020, by and among JAMF Holdings, Inc., as borrower, Juno Intermediate, Inc., as a guarantor, Juno Parent, LLC, as a guarantor, the other loan parties thereto, the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to the Company’s Exhibit 10.1 to the Company’s Form 8-K filed with the SEC on July 29, 2020).
10.10	Amended and Restated Director Nomination Agreement, dated September 1, 2020, by and among the Company and the signatories party thereto (incorporated by reference to Exhibit 10.10 to the Company’s Quarterly Report on Form 10-Q filed with the SEC on September 2, 2020).
10.11	Master Services Agreement, effective as of November 13, 2017, by and between Vista Consulting Group, LLC and JAMF Holdings, Inc. (incorporated by reference to Exhibit 10.4 to the Company’s Registration Statement on Form S-1 (No. 333-239535) filed with the SEC on June 29, 2020).
10.12+	Letter Agreement, dated as of October 20, 2017, between JAMF Holdings, Inc. and Dean Hager (incorporated by reference to Exhibit 10.5 to the Company’s Registration Statement on Form S-1 (No. 333-239535) filed with the SEC on June 29, 2020).
10.13+	Letter Agreement, dated as of August 8, 2022, between JAMF Holdings, Inc. and Ian Goodkind (incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed with the SEC on August 12, 2022).
10.14+	Letter Agreement, dated as of November 20, 2017, between JAMF Holdings, Inc. and John Strosahl (incorporated by reference to Exhibit 10.7 to the Company’s Registration Statement on Form S-1 (333-239535) filed with the SEC on June 29, 2020).
10.15+	First Amendment, dated as of April 22, 2021, to the Letter Agreement between JAMF Holdings, Inc. and Dean Hager (incorporated by reference to the Company’s Current Report on Form 8-K filed with the SEC on April 26, 2021).
10.16+	First Amendment, dated as of April 22, 2021, to the Letter Agreement between JAMF Holdings, Inc. and John Strosahl (incorporated by reference to the Company’s Current Report on Form 8-K filed with the SEC on April 26, 2021).
10.17	Incremental Facility Amendment No. 1, dated as of July 1, 2021, by and among JAMF Holdings, Inc., as borrower, Juno Intermediate, Inc., as a guarantor, Juno Parent, LLC, as a guarantor, the other loan parties thereto, the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.4 to our Quarterly Report on Form 10-Q filed with the SEC on August 20, 2021).
10.18	Form of Capped Call Confirmation (incorporated by reference to our Exhibit 10.1 to our Current Report on Form 8-K filed with the SEC on September 20, 2021).
10.19+	Jamf Holding Corp. Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.20 to our Annual Report on Form 10-K filed with the SEC on March 1, 2022).
21.1	List of subsidiaries of Jamf Holding Corp.
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm, filed herewith.
31.1	Certification of the Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
31.2	Certification of the Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
32.1*	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, filed herewith.
32.2*	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, filed herewith.
101.INS	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document

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101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* The certifications furnished in Exhibit 32.1 and Exhibit 32.2 hereto are deemed to accompany this Annual on Form 10-K and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the registrant specifically incorporates it by reference.

+ Indicates a management contract or compensatory plan or arrangement.

Item 16. Form 10-K Summary

None.

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.

JAMF HOLDING CORP. (Registrant)

Date: March 1, 2023

By: /s/ Ian Goodkind
 Ian Goodkind
 Chief Financial Officer
 (Principal Financial and Accounting Officer)

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

Date: March 1, 2023

By: /s/ Dean Hager
 Dean Hager
 Chief Executive Officer and Director
 (Principal Executive Officer)

Date: March 1, 2023

By: /s/ Ian Goodkind
 Ian Goodkind
 Chief Financial Officer
 (Principal Financial and Accounting Officer)

Date: March 1, 2023

By: /s/ David A. Breach
 David A. Breach
 Director

Date: March 1, 2023

By: /s/ Andre Durand
 Andre Durand
 Director

Date: March 1, 2023

By: /s/ Michael Fosnaugh
 Michael Fosnaugh
 Director

Date: March 1, 2023

By: /s/ Virginia Gambale
 Virginia Gambale
 Director

Date: March 1, 2023

By: /s/ Charles Guan
 Charles Guan
 Director

Date: March 1, 2023

By: /s/ Kevin Klausmeyer
 Kevin Klausmeyer
 Director

Date: March 1, 2023

By: /s/ Vina Leite
 Vina Leite
 Director

Date: March 1, 2023

By: /s/ Christina Lema
 Christina Lema
 Director

Date: March 1, 2023

By: /s/ Martin Taylor
 Martin Taylor
 Director

Corporate Information

Board of Directors:

David A. Breach
President and Chief Operating Officer
Officer, Vista Equity Partners

Andre Durand
Chief Executive Officer, Ping Identity
Corporation

Michael Fosnaugh
Chairperson of the Board of Directors & Senior
Managing Director, Vista Equity Partners

Virginia Gambale
Managing Partner, Azimuth Partners

Charles Guan
Vice President, Vista Equity Partners

Dean Hager
Chief Executive Officer & Director

Kevin Klausmeyer
Director, Jamf

Vina Leite
Chief People Officer, GoodRx

Christina Lema
Managing Director & General Counsel, Vista
Equity Partners

Martin Taylor
Senior Managing Director, Vista Equity
Partners

Executive Officers:

Dean Hager
Chief Executive Officer & Director

Michelle Bucaria
Chief People Officer

Ian Goodkind
Chief Financial Officer

Linh Lam
Chief Information Officer

Jeff Lendino
Chief Legal Officer

John Strosahl
Chief Operating Officer & President

Jason Wudi
Chief Strategist

Corporate Headquarters:

Jamf Holding Corp.
100 Washington Ave S, Suite 1100
Minneapolis, Minnesota 55401

Stock Transfer Agent:

**American Stock Transfer & Trust
Company, LLC**
help@astfinancial.com
(800) 937-5449 or (718) 921-8124

Investor Relations:

Website: ir.jamf.com
Email: ir@jamf.com

Stock Exchange Listing:

NASDAQ
Symbol: JAMF

