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

FORM 10-Q

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 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

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:

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

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 is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

On July 27, 2022, the registrant had 120,689,645 shares of common stock, $0.001 par value, outstanding.

JAMF HOLDING CORP.

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GLOSSARY

We use acronyms, abbreviations, and other defined terms throughout this quarterly report on Form 10-Q. 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 Option Plan	2017 Stock Option Plan
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
ARR	Annual Recurring Revenue
AWS	Amazon Web Services
ASC 606	ASC Topic 606, *Revenue from Contracts with Customers*
ASC 805	ASC Topic 805, *Business Combinations*
ASC 820	ASC Topic 820, *Fair Value Measurement*
ASC 850	ASC Topic 850, *Related Party Disclosures*
ASU	Accounting Standards Update
cmdSecurity	cmdSecurity Inc.
CODM	Chief operating decision maker
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
Digita	Digita Security LLC
Exchange Act	The Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
GAAP	U.S. generally accepted accounting principles
IPR&D	In-process research and development
JNGF	Jamf Nation Global Foundation
LTIP	Long-term incentive plan
Merger Agreement	Agreement and Plan of Merger, dated as of May 5, 2021 in connection with the acquisition of Wandera
Prior Period ARR	ARR from the cohort of all customers as of 12 months prior to period end
RSU	Restricted stock unit
SEC	Securities and Exchange Commission
UK	United Kingdom
Vista	Vista Equity Partners, LLC and its affiliates
Wandera	Wandera, Inc.
ZTNA	Zero Trust Network Access

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

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

	June 30, 2022 (Unaudited)	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 182,349	$ 177,150
Trade accounts receivable, net of allowances of $479 and $391 at June 30, 2022 and December 31, 2021, respectively	96,450	79,143
Income taxes receivable	450	608
Deferred contract costs	15,460	12,904
Prepaid expenses	17,513	17,581
Other current assets	4,953	4,212
Total current assets	317,175	291,598
Equipment and leasehold improvements, net	17,334	18,045
Goodwill	823,671	845,734
Other intangible assets, net	233,557	264,593
Deferred contract costs, non-current	34,823	29,842
Other assets	39,530	30,608
Total assets	$ 1,466,090	$ 1,480,420
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 9,506	$ 9,306
Accrued liabilities	50,761	54,022
Income taxes payable	203	167
Deferred revenues	249,374	223,031
Total current liabilities	309,844	286,526
Deferred revenues, non-current	67,578	59,097
Deferred tax liability, net	7,596	8,700
Convertible senior notes, net	363,265	362,031
Other liabilities	23,861	25,640
Total liabilities	772,144	741,994
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock, $0.001 par value, 50,000,000 shares authorized at June 30, 2022 and December 31, 2021; no shares issued and outstanding at June 30, 2022 and December 31, 2021	—	—
Common stock, $0.001 par value, 500,000,000 shares authorized at June 30, 2022 and December 31, 2021; 120,310,047 and 119,426,064 shares issued and outstanding at June 30, 2022 and December 31, 2021, respectively	120	119
Additional paid-in capital	987,576	913,581
Accumulated other comprehensive loss	(37,574)	(7,866)
Accumulated deficit	(256,176)	(167,408)
Total stockholders' equity	693,946	738,426
Total liabilities and stockholders' equity	$ 1,466,090	$ 1,480,420

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Revenue:				
Subscription	$ 109,407	$ 80,718	$ 211,608	$ 155,200
Services	5,027	3,929	8,971	7,932
License	1,204	1,591	3,317	3,833
Total revenue	115,638	86,238	223,896	166,965
Cost of revenue:				
Cost of subscription (exclusive of amortization expense shown below)	20,634	13,875	40,536	25,889
Cost of services (exclusive of amortization expense shown below)	3,493	2,607	6,600	5,072
Amortization expense	5,265	2,860	10,483	5,637
Total cost of revenue	29,392	19,342	57,619	36,598
Gross profit	86,246	66,896	166,277	130,367
Operating expenses:				
Sales and marketing	58,750	32,617	105,075	62,784
Research and development	33,983	17,203	58,785	32,829
General and administrative	48,321	27,508	73,933	43,752
Amortization expense	7,034	5,623	14,063	11,250
Total operating expenses	148,088	82,951	251,856	150,615
Loss from operations	(61,842)	(16,055)	(85,579)	(20,248)
Interest expense, net	(641)	(167)	(1,500)	(222)
Foreign currency transaction loss	(676)	(308)	(1,457)	(526)
Loss before income tax benefit (provision)	(63,159)	(16,530)	(88,536)	(20,996)
Income tax benefit (provision)	20	63	(232)	(60)
Net loss	$ (63,139)	$ (16,467)	$ (88,768)	$ (21,056)
Net loss per share, basic and diluted	$ (0.53)	$ (0.14)	$ (0.74)	$ (0.18)
Weighted-average shares used to compute net loss per share, basic and diluted	119,941,482	117,909,720	119,768,871	117,649,467

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Net loss	$ (63,139)	$ (16,467)	$ (88,768)	$ (21,056)
Other comprehensive loss:				
Foreign currency translation adjustments	(21,625)	—	(29,708)	—
Total other comprehensive loss	(21,625)	—	(29,708)	—
Comprehensive loss	$ (84,764)	$ (16,467)	$ (118,476)	$ (21,056)

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

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

	Stock Class					
	Common					
	Shares	Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Stockholders' Equity
Three Months Ended June 30, 2022:						
Balance, March 31, 2022	**119,659,455**	**$ 119**	**$ 930,788**	**$ (15,949)**	**$ (193,037)**	**$ 721,921**
Exercise of stock options	59,573	1	345	—	—	346
Vesting of restricted stock units	460,569	—	—	—	—	—
Issuance of common stock under the employee stock purchase plan	130,450	—	3,419	—	—	3,419
Share-based compensation	—	—	53,024	—	—	53,024
Foreign currency translation adjustments	—	—	—	(21,625)	—	(21,625)
Net loss	—	—	—	—	(63,139)	(63,139)
Balance, June 30, 2022	**120,310,047**	**$ 120**	**$ 987,576**	**$ (37,574)**	**$ (256,176)**	**$ 693,946**
Three Months Ended June 30, 2021:						
Balance, March 31, 2021	**117,705,895**	**$ 118**	**$ 909,966**	**$ —**	**$ (96,808)**	**$ 813,276**
Exercise of stock options	544,017	—	3,044	—	—	3,044
Share-based compensation	—	—	4,106	—	—	4,106
Net loss	—	—	—	—	(16,467)	(16,467)
Balance, June 30, 2021	**118,249,912**	**$ 118**	**$ 917,116**	**$ —**	**$ (113,275)**	**$ 803,959**

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

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

	Stock Class Common Shares	Stock Class Common Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Stockholders' Equity
Six Months Ended June 30, 2022:						
Balance, December 31, 2021	**119,426,064**	**$ 119**	**$ 913,581**	**$ (7,866)**	**$ (167,408)**	**$ 738,426**
Exercise of stock options	270,773	1	1,542	—	—	1,543
Vesting of restricted stock units	482,760	—	—	—	—	—
Issuance of common stock under the employee stock purchase plan	130,450	—	3,419	—	—	3,419
Share-based compensation	—	—	69,034	—	—	69,034
Foreign currency translation adjustments	—	—	—	(29,708)	—	(29,708)
Net loss	—	—	—	—	(88,768)	(88,768)
Balance, June 30, 2022	**120,310,047**	**$ 120**	**$ 987,576**	**$ (37,574)**	**$ (256,176)**	**$ 693,946**
Six Months Ended June 30, 2021:						
Balance, December 31, 2020	**116,992,472**	**$ 117**	**$ 903,116**	**$ —**	**$ (92,219)**	**$ 811,014**
Exercise of stock options	1,257,440	1	7,062	—	—	7,063
Share-based compensation	—	—	6,938	—	—	6,938
Net loss	—	—	—	—	(21,056)	(21,056)
Balance, June 30, 2021	**118,249,912**	**$ 118**	**$ 917,116**	**$ —**	**$ (113,275)**	**$ 803,959**

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

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

	Six Months Ended June 30,	
	2022	**2021**
Cash flows from operating activities		
Net loss	$ (88,768)	$ (21,056)
Adjustments to reconcile net loss to cash provided by operating activities:		
Depreciation and amortization expense	27,784	19,538
Amortization of deferred contract costs	7,859	5,861
Amortization of debt issuance costs	1,358	249
Non-cash lease expense	2,943	2,398
Provision for credit losses and returns	274	(41)
Share-based compensation	69,034	6,938
Deferred tax benefit	(1,199)	(669)
Adjustment to contingent consideration	188	4,237
Other	1,438	454
Changes in operating assets and liabilities:		
Trade accounts receivable	(17,870)	2,249
Income tax receivable/payable	165	(238)
Prepaid expenses and other assets	(3,851)	(2,986)
Deferred contract costs	(15,438)	(11,848)
Accounts payable	292	2,284
Accrued liabilities	(3,100)	(1,889)
Deferred revenue	35,233	32,627
Other liabilities	—	(86)
Net cash provided by operating activities	16,342	38,022
Cash flows from investing activities		
Acquisitions, net of cash acquired	(4,023)	(3,041)
Purchases of equipment and leasehold improvements	(2,876)	(5,211)
Other	(79)	22
Net cash used in investing activities	(6,978)	(8,230)
Cash flows from financing activities		
Debt issuance costs	(50)	(530)
Cash paid for offering costs	(80)	(243)
Cash paid for contingent consideration	(4,588)	(4,206)
Payment of acquisition-related holdback	(200)	—
Proceeds from the exercise of stock options	1,543	7,063
Net cash (used in) provided by financing activities	(3,375)	2,084
Effect of exchange rate changes on cash and cash equivalents	(790)	(259)
Net increase in cash and cash equivalents	5,199	31,617
Cash and cash equivalents, beginning of period	177,150	194,868
Cash and cash equivalents, end of period	$ 182,349	$ 226,485
Supplemental disclosures of cash flow information:		
Cash paid for:		
Interest	$ 371	$ 6
Income taxes, net of refunds	751	832
Non-cash activities:		
Employee stock purchase plan	3,419	—
Offering costs accrued but not paid	44	300
Operating lease assets obtained in exchange for operating lease liabilities	8,497	(19)

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

Note 1. Basis of presentation and description of business

Description of business

We are the standard in Apple Enterprise Management, and our cloud software platform is the only vertically-focused Apple infrastructure and security platform of scale in the world. 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.

Basis of presentation and principles of consolidation

The accompanying condensed consolidated financial statements, which include the accounts of the Company and its wholly owned subsidiaries, have been prepared in accordance with GAAP and applicable rules and regulations of the SEC regarding interim financial reporting. All intercompany accounts and transactions have been eliminated.

Unaudited interim condensed consolidated financial information

The interim condensed consolidated balance sheet as of June 30, 2022, the condensed consolidated statements of operations, of comprehensive loss, and of stockholders' equity for the three and six months ended June 30, 2022 and 2021, the condensed consolidated statements of cash flows for the six months ended June 30, 2022 and 2021, and the related notes are unaudited. The condensed consolidated balance sheet as of December 31, 2021 was derived from our audited consolidated financial statements that were included in our Annual Report on Form 10-K for the year ended December 31, 2021, which was filed with the SEC on March 1, 2022. The accompanying unaudited condensed consolidated financial statements and related notes should be read in conjunction with the consolidated financial statements and related notes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2021.

These unaudited interim condensed consolidated financial statements have been prepared on the same basis as the annual consolidated financial statements and, in management's opinion, include all adjustments necessary for the fair presentation of the consolidated financial position, results of operations, and cash flows of the Company. All adjustments made were of a normal recurring nature. The results for the three and six months ended June 30, 2022 are not necessarily indicative of the results to be expected for the year ending December 31, 2022 or for any future period.

Use of estimates

The preparation of the condensed 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 right-of-use 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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021 [(1)]	2022	2021 [(1)]
	(in thousands)			
The Americas [(2)]	$ 79,980	$ 62,419	$ 155,129	$ 121,264
Europe, the Middle East, India, and Africa	27,517	17,701	53,514	33,930
Asia Pacific	8,141	6,118	15,253	11,771
	$ 115,638	$ 86,238	$ 223,896	$ 166,965

(1) Previously reported revenues by geographic region for the three and six months ended June 30, 2021 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 United States.

Note 2. Summary of significant accounting policies

The Company's significant accounting policies are discussed in Note 2 to the consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2021. There have been no significant changes to these policies during the three and six months ended June 30, 2022. The following describes the impact of certain policies.

Trade accounts receivable, net

Credit is extended to customers in the normal course of business, generally with 30-day payment terms. Trade accounts receivable are recorded at the invoiced amount, net of allowances.

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.

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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Balance, beginning of period	$ 492	$ 603	$ 391	$ 530
Provision	140	(100)	262	56
Write-offs	(155)	(45)	(182)	(172)
Recoveries of amounts previously written off	2	22	8	66
Balance, end of period	$ 479	$ 480	$ 479	$ 480

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.

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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
SaaS subscription and support and maintenance	$ 104,291	$ 72,121	$ 200,641	$ 138,897
On-premise subscription	5,116	8,597	10,967	16,303
Subscription revenue	109,407	80,718	211,608	155,200
Professional services	5,027	3,929	8,971	7,932
Perpetual licenses	1,204	1,591	3,317	3,833
Non-subscription revenue	6,231	5,520	12,288	11,765
Total revenue	$ 115,638	$ 86,238	$ 223,896	$ 166,965

Contract Balances

If revenue is recognized in advance of the right to invoice, a contract asset is recorded in other current assets on the condensed consolidated balance sheets. The opening and closing balances of contract assets were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Balance, beginning of the period	$ 1,885	$ 1,186	$ 1,792	$ 947
Balance, end of the period	1,840	1,596	1,840	1,596
Change	$ (45)	$ 410	$ 48	$ 649

For the three and six months ended June 30, 2022 and 2021, the allowance for expected credit losses associated with contract assets was not material.

Contract liabilities consist of customer billings in advance of revenue being recognized. The Company invoices its customers for subscription, support and maintenance, and services in advance.

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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Balance, beginning of the period	$ 292,499	$ 221,579	$ 282,128	$ 205,509
Revenue earned	(93,199)	(66,967)	(154,473)	(111,398)
Deferral of revenue	117,652	83,845	189,297	144,346
Balance, end of the period	$ 316,952	$ 238,457	$ 316,952	$ 238,457

There were no significant changes to our contract assets and liabilities during the three and six months ended June 30, 2022 and 2021 outside of our sales activities.

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 June 30, 2022, the Company had $372.0 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 condensed consolidated balance sheets when the period of benefit is determined to be greater than one year.

Total amortization of contract costs for the three months ended June 30, 2022 and 2021 was $4.1 million and $3.2 million, respectively. Total amortization of contract costs for the six months ended June 30, 2022 and 2021 was $7.9 million and $5.9 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 three and six months ended June 30, 2022 and 2021.

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. The adoption of the standard did not have any impact on the Company’s condensed consolidated financial statements. We will apply the new guidance to future acquisitions.

Note 3. Financial instruments fair value

We report financial assets and liabilities and nonfinancial assets and liabilities that are recognized or disclosed at fair value in the condensed consolidated financial statements on a recurring basis 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. When determining the fair value measurements for assets and liabilities, which are required to be recorded at fair value, we consider the principal or most advantageous market in which we would transact and the market-based risk measurements or assumptions that market participants would use in pricing the asset or liability, such as inherent risk, transfer restrictions, and credit risk.

ASC 820 also establishes a fair value hierarchy, which prioritizes the inputs to valuation techniques used to measure fair value into three levels. Fair value represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. GAAP established a hierarchy framework to classify the fair value based on the observability of significant inputs to the 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 4 for more information.

The fair value of these financial instruments were as follows:

	June 30, 2022			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash equivalents:				
Money market funds	$ 151,172	$ —	$ —	$ 151,172
Total cash equivalents	$ 151,172	$ —	$ —	$ 151,172
Contingent consideration:				
Accrued liabilities	$ —	$ —	$ 5,700	$ 5,700
Total contingent consideration	$ —	$ —	$ 5,700	$ 5,700

	December 31, 2021			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash equivalents:				
Money market funds	$ 146,037	$ —	$ —	$ 146,037
Total cash equivalents	$ 146,037	$ —	$ —	$ 146,037
Contingent consideration:				
Accrued liabilities	$ —	$ —	$ 4,588	$ 4,588
Other liabilities	—	—	5,512	5,512
Total contingent consideration	$ —	$ —	$ 10,100	$ 10,100

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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Balance, beginning of period	$ 5,600	$ 8,799	$ 10,100	$ 8,200
Additions	—	—	—	359
Total (gains) losses included in:				
Net loss	100	3,937	188	4,237
Payments	—	(4,206)	(4,588)	(4,206)
Other	—	(230)	—	(290)
Balance, end of period	$ 5,700	$ 8,300	$ 5,700	$ 8,300

The change in the fair value of the contingent consideration is included in general and administrative expenses in the condensed consolidated statements of operations. The adjustment for the three and six months ended June 30, 2022 and 2021 primarily reflected 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 condensed consolidated balance sheets:

	June 30, 2022		December 31, 2021	
	Net Carrying Value	Estimated Fair Value	Net Carrying Value	Estimated Fair Value
	(in thousands)			
2026 Notes	$ 363,265	$ 317,699	$ 362,031	$ 398,044

As of June 30, 2022 and December 31, 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 $10.5 million and $11.7 million, respectively. See Note 8 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. Acquisitions

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 condensed 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 condensed 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, mobile threat defense, 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 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.

The Company accounted for the acquisition by applying the acquisition method of accounting for business combinations in accordance with ASC 805. Accordingly, the purchase price was allocated to the assets acquired and liabilities assumed based on their estimated fair values as of the date of acquisition. In accordance with GAAP, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Any residual purchase price is recorded as goodwill. 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	$	409,275

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		$ 102,050

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.

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.

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 the first quarter of 2022 and the second quarter of 2021, respectively, to the former owners of the acquired business. If the acquired business continues to achieve the revenue milestones, an additional cash payment will be made within 30 days of December 31, 2022. See Note 3 for more information on the fair value of the contingent consideration.

Note 5. Goodwill and other intangible assets

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Goodwill, beginning of period	$ 841,984	$ 541,850	$ 845,734	$ 541,480
Goodwill acquired	—	—	3,014	370
Foreign currency translation adjustment	(18,313)	—	(25,077)	—
Goodwill, end of period	$ 823,671	$ 541,850	$ 823,671	$ 541,850

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

	June 30, 2022				
	Useful Life	Gross Value	Accumulated Amortization	Net Carrying Value	Weighted-Average Remaining Useful Life
			(in thousands)		
Trademarks	3 - 8 years	$ 34,652	$ 19,988	$ 14,664	3.3 years
Customer relationships	2 - 12 years	247,507	86,183	161,324	7.8 years
Developed technology	5 - 6.5 years	111,415	56,869	54,546	4.9 years
Non-competes	2 - 3 years	1,588	649	939	1.6 years
Order backlog	2.5 years	3,533	1,449	2,084	1.5 years
Total intangible assets		$ 398,695	$ 165,138	$ 233,557	

	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		$ 406,320	$ 141,727	$ 264,593	

The gross value in the tables above includes a cumulative foreign currency translation adjustment of $(10.4) million and $(2.1) million as of June 30, 2022 and December 31, 2021, respectively. The accumulated amortization in the table above includes a cumulative foreign currency translation adjustment of $(1.0) million as of June 30, 2022. The cumulative foreign currency translation adjustment for accumulated amortization was not material as of December 31, 2021.

Amortization expense was $12.3 million and $8.5 million for the three months ended June 30, 2022 and 2021, respectively, and $24.5 million and $16.9 million for the six months ended June 30, 2022 and 2021, respectively.

There were no impairments to goodwill during the three and six months ended June 30, 2022 and 2021. There were no material impairments to intangible assets during the three and six months ended June 30, 2022 and 2021.

Note 6. Leases

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

Leases	Balance Sheet Classification	June 30, 2022	December 31, 2021
		(in thousands)	
Assets			
Operating lease assets	Other assets	$ 27,100	$ 21,600
Liabilities			
Operating lease liabilities - current	Accrued liabilities	$ 5,951	$ 5,251
Operating lease liabilities - non-current	Other liabilities	23,829	20,086
Total operating lease liabilities		$ 29,780	$ 25,337

Maturities of the Company’s operating lease liabilities as of June 30, 2022 were as follows:

	Operating Leases
	(in thousands)
Years ending December 31:	
2022 (remaining six months)	$ 3,268
2023	7,204
2024	6,208
2025	4,581
2026	4,585
Thereafter	7,148
Total lease payments	32,994
Less: imputed interest	3,214
Total present value of lease liabilities	$ 29,780

Note 7. Commitments and contingencies

Hosting Services and Other Support Software Agreements

In the second quarter of 2022, the Company entered into an amended contractual agreement with an unrelated party for hosting services, which includes a non-cancelable commitment of $100.0 million over the next three years. Any remaining commitments under the prior agreement were terminated upon the commencement date of the amended agreement.

Contingencies

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 June 30, 2022 or December 31, 2021.

Note 8. Debt

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. As of June 30, 2022, the conditions allowing holders of the 2026 Notes to convert were not met.

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

	Three Months Ended June 30, 2022	Six Months Ended June 30, 2022
	(in thousands)	
Contractual interest expense	$ 117	$ 234
Amortization of issuance costs	617	1,234

The effective interest rate on the 2026 Notes was 0.81% for the three and six months ended June 30, 2022. See Note 3 for additional information on the Company's 2026 Notes.

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 June 30, 2022 and December 31, 2021. As of both June 30, 2022 and December 31, 2021, we had $1.0 million of letters of credit outstanding under our 2020 Revolving Credit Facility.

As of June 30, 2022 and December 31, 2021, debt issuance costs related to the 2020 Credit Agreement of $0.8 million and $0.9 million, respectively, are included in other assets in the condensed consolidated balance sheets.

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.

Note 9. 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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Cost of revenue:				
Subscription	$ 2,061	$ 344	$ 4,016	$ 668
Services	313	75	617	152
Sales and marketing	13,811	1,088	19,670	1,930
Research and development	10,631	1,153	14,490	1,931
General and administrative	26,208	1,446	30,241	2,257
	$ 53,024	$ 4,106	$ 69,034	$ 6,938

Equity Incentive Plans

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 June 30, 2022, 14,143,905 shares of common stock are reserved for additional grants under the 2020 Plan. As of June 30, 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. No options were granted during the six months ended June 30, 2022.

Return Target Options

The table below summarizes return target option activity for the six months ended June 30, 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	(16,229)	5.49		318
Forfeitures	—	—		—
Outstanding, June 30, 2022	3,671,435	$ 6.76	6.3	$ 66,140
Options exercisable at June 30, 2022	3,671,435	$ 6.76	6.3	$ 66,140
Vested or expected to vest at June 30, 2022	3,671,435	$ 6.76	6.3	$ 66,140

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. The return target options outstanding on June 27, 2022 were modified such that these options were deemed fully vested as of June 30, 2022. This modification resulted in the recognition of $33.0 million of stock-based compensation expense during the three months ended June 30, 2022. There is no remaining unrecognized compensation expense related to these return target options as of June 30, 2022. The total fair value of return target options vested during the six months ended June 30, 2022 was $33.0 million.

Service-Based Options

The table below summarizes the service-based option activity for the six months ended June 30, 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	(254,544)	5.71		7,937
Forfeitures	—	—		—
Outstanding, June 30, 2022	1,388,722	$ 5.67	5.6	$ 26,520
Options exercisable at June 30, 2022	1,273,921	$ 5.51	5.4	$ 24,533
Vested or expected to vest at June 30, 2022	1,388,722	$ 5.67	5.6	$ 26,520

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 total fair value of service-based options vested during the six months ended June 30, 2022 was $0.4 million. There was $0.6 million of unrecognized compensation expense related to service-based options that is expected to be recognized over a weighted-average period of 1.2 years as of June 30, 2022. 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.

Restricted Stock Units

RSU activity for the six months ended June 30, 2022 was as follows:

	Units	Weighted-Average Grant Date Fair Value (per share)
Outstanding, December 31, 2021	6,890,938	$ 31.59
Granted	2,978,456	29.12
Vested	(482,760)	34.57
Forfeited	(286,591)	30.82
Outstanding, June 30, 2022	9,100,043	$ 30.64

RSUs under the 2020 Plan generally vest ratably over four years. There was $240.5 million of unrecognized compensation expense related to unvested RSUs that is expected to be recognized over a weighted-average period of 3.3 years as of June 30, 2022. The total fair value of RSUs vested during the six months ended June 30, 2022 was $16.7 million.

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% vest on the one year anniversary of the grant date, provided the employee remains 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 $3.2 million of stock-based compensation expense during the six months ended June 30, 2022. The expense on the unvested RSUs is recognized on a straight-line basis over the vesting period.

Employee Stock Purchase Plan

As of June 30, 2022, the Company has withheld, at the employees’ request, $1.3 million of eligible employee compensation, which is included in accrued liabilities in the condensed consolidated balance sheet, for purchases of common stock under the 2021 ESPP.

As of June 30, 2022, 4,063,810 shares of common stock are reserved for future issuance under the 2021 ESPP. During the six months ended June 30, 2022, the Company’s employees purchased 130,450 shares of common stock under the 2021 ESPP at a purchase price of $26.18 per share. Total proceeds to the Company were $3.4 million during the six months ended June 30, 2022.

The average grant date fair value for the offering period under the 2021 ESPP that commenced on May 2, 2022 was $9.22 per share. The Company used the following assumptions in the Black-Scholes option pricing model to estimate the fair value:

	Three and Six Months Ended June 30, 2022
Expected term	0.5 years
Expected volatility	60.05%
Risk-free interest rate	1.49%
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 June 30, 2022.

Note 10. Net loss per share

The following table sets forth the computation of basic and diluted net loss per share:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands, except share and per share amounts)			
Numerator:				
Net loss	$ (63,139)	$ (16,467)	$ (88,768)	$ (21,056)
Denominator:				
Weighted-average shares used to compute net loss per share, basic and diluted	119,941,482	117,909,720	119,768,871	117,649,467
Basic and diluted net loss per share	$ (0.53)	$ (0.14)	$ (0.74)	$ (0.18)

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 three and six months ended June 30, 2022 and 2021, 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 because the potentially dilutive shares would have been antidilutive if included in the 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 June 30,	
	2022	2021
Stock options outstanding	5,060,157	5,977,050
Unvested restricted stock units	9,100,043	3,093,800
Shares related to the 2026 Notes	7,475,897	—
Shares committed under the 2021 ESPP	188,533	—
Total potentially dilutive securities	21,824,630	9,070,850

Note 11. Income taxes

The Company's effective tax rates for the three months ended June 30, 2022 and 2021 were 0.0% and 0.4%, respectively. The effective tax rate for the three months ended June 30, 2022 differs from the statutory rate primarily as a result of valuation allowances. The effective tax rate for the three months ended June 30, 2022 was impacted by $0.9 million of discrete income tax expense. The Company's annual effective tax rates for the three months ended June 30, 2022 and 2021 were 1.4% and (0.5)%, respectively.

The Company's effective tax rate for both the six months ended June 30, 2022 and 2021 was (0.3)%. The effective tax rate for the six months ended June 30, 2022 differs from the statutory rate primarily as a result of valuation allowances. The effective tax rate for the six months ended June 30, 2022 was impacted by $1.5 million of discrete income tax expense.

Note 12. Related party transactions

As of June 30, 2022 and December 31, 2021, the Company accrued $0.8 million and $1.5 million, respectively, related to JNGF pledges, which are included in accrued liabilities in the condensed consolidated balance sheets. 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 June 30, 2022. However, Vista is deemed a related party in accordance with ASC 850 as it continues to be a principal owner of the Company. There were no material transactions with Vista or its affiliates during the three and six months ended June 30, 2022 and 2021.

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements that are subject to risks and uncertainties. All statements other than statements of historical fact included in this Quarterly Report on Form 10-Q 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. All forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those that we expected, including:

- the impact on our operations from macroeconomic and market conditions, including heightened inflation, slower growth or recession, changes to fiscal and monetary policy, higher interest rates, currency fluctuations, challenges in the supply chain, and the effects of the ongoing COVID-19 pandemic;
- 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;
- our ability to retain our current customers;
- our ability to sell additional functionality to our current customers;
- our ability to correctly estimate market opportunity and forecast market growth;
- risks associated with failing to continue our recent growth rates;
- our dependence on one of our products for a substantial portion of our revenue;
- our ability to scale our business and manage our expenses;
- 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 and divestitures (such as our acquisition of Wandera);
- 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;
- the impact of adverse general and industry-specific economic and market conditions;
- the impact of reductions in IT spending;
- 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;
- the risks associated with sales to new and existing enterprise customers;
- our ability to develop and expand our marketing and sales capabilities;
- the risks associated with free trials and other inbound, lead-generation sales strategies;
- the risks associated with indemnity provisions in our contracts;
- our management team's limited experience managing a public company;
- risks associated with cyber-security 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;
- 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;
- risks associated with global events (such as Russia's invasion of Ukraine and related sanctions); and
- other factors disclosed in the section entitled "Risk Factors" and elsewhere in our Annual Report on Form 10-K for the year ended December 31, 2021, as supplemented by our subsequent Quarterly Reports on Form 10-Q.

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 our Annual Report on Form 10-K and "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our subsequent Quarterly Reports on Form 10-Q. 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 Quarterly Report on Form 10-Q 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.

Item 2. 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 condensed consolidated financial statements and the related notes included elsewhere in this Quarterly Report on Form 10-Q and our consolidated financial statements and the related notes in our Annual Report on Form 10-K for the year ended December 31, 2021. 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, elsewhere in this Quarterly Report on Form 10-Q, in our Annual Report on Form 10-K for the year ended December 31, 2021, and in our subsequent Quarterly Reports on Form 10-Q, particularly in the sections entitled "Risk Factors" and "Forward-Looking Statements."

Overview

We are the standard in Apple Enterprise Management, and our cloud software platform is the only vertically-focused Apple infrastructure and security platform of scale in the world. 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.

On July 1, 2021, we completed our acquisition of Wandera, a leader in zero trust cloud security and access for mobile devices, extending our leadership in Apple Enterprise Management. The acquisition uniquely positioned us to help IT and security teams protect devices, data, and applications while extending the intended Apple experience through the most robust and scalable Apple Enterprise Management platform in the market.

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.

Expand within our customer base. Our ability to increase revenue within our existing customer base 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, in 2018, we introduced Jamf Connect to provide users with a seamless connection to corporate resources using a single identity and in 2019 we introduced Jamf Protect to extend Apple's security and privacy model to enterprise teams by creating unprecedented visibility into MacOS fleets through customized remote monitoring and threat detection and prevention. In July 2021, we completed our acquisition of Wandera, which enhanced our Apple Enterprise Management Platform and strengthened our position in security and mobile with expansion opportunities. Wandera solutions include Jamf Threat Defense, Jamf Data Policy, and Jamf Private Access, which uniquely position us to address trends in digital transformation, remote work, and ZTNA.

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 add headcount to 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, and commercial markets. 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. Our acquisition of Wandera, a global company with key offices in London, Brno, and San Francisco, further expands our international presence.

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.

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 28.4 million and 23.2 million as of June 30, 2022 and 2021, respectively, representing a 22% year-over-year growth rate. The increase in number of devices reflects our growth across industries, products, and geographies, as well as the Wandera acquisition in the third quarter of 2021.

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. 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 $466.0 million and $333.0 million as of June 30, 2022 and 2021, respectively, which is an increase of 40% year-over-year. The growth in our ARR is primarily driven by our device expansion rates, our new logo acquisition, the upselling and cross selling of products into our installed base, and the acquisition of Wandera.

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 117% and 119% for the trailing twelve months ended June 30, 2022 and 2021, respectively. Our dollar-based net retention rate for the trailing twelve months ended June 30, 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 base, particularly Jamf Connect and Jamf Protect.

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 subscriptions and perpetual licenses and services.

Subscription. Subscription revenue consists of sales of SaaS subscriptions and on-premise 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 "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Estimates" in our Annual Report on Form 10-K for the year ended December 31, 2021 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 will now be 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 revenues 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 though 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 that are incremental to the acquisition of customer contracts are deferred and amortized over the period of benefit, which is estimated to be generally 5 years. We expect our sales and marketing expenses to increase on an absolute dollar basis as we expand our sales personnel and marketing efforts. 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.

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” in our Annual Report on Form 10-K for the year ended December 31, 2021 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 information technology 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. In the third quarter of 2021, we reclassified the unused commitment fee on our line of credit from general and administrative expenses to interest expense, net on a prospective basis. The impact to prior period financial statements was not material.

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.

Income Tax Benefit (Provision)

Income tax benefit (provision) 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 condensed consolidated statements of operations data for the periods indicated:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Revenue:				
Subscription	$ 109,407	$ 80,718	$ 211,608	$ 155,200
Services	5,027	3,929	8,971	7,932
License	1,204	1,591	3,317	3,833
Total revenue	115,638	86,238	223,896	166,965
Cost of revenue:				
Cost of subscription[(1)(2)(3)(4)] (exclusive of amortization expense shown below)	20,634	13,875	40,536	25,889
Cost of services[(1)(2)(3)] (exclusive of amortization expense shown below)	3,493	2,607	6,600	5,072
Amortization expense	5,265	2,860	10,483	5,637
Total cost of revenue	29,392	19,342	57,619	36,598
Gross profit	86,246	66,896	166,277	130,367
Operating expenses:				
Sales and marketing[(1)(2)(3)(4)]	58,750	32,617	105,075	62,784
Research and development[(1)(2)(3)(4)]	33,983	17,203	58,785	32,829
General and administrative[(1)(2)(3)(4)]	48,321	27,508	73,933	43,752
Amortization expense	7,034	5,623	14,063	11,250
Total operating expenses	148,088	82,951	251,856	150,615
Loss from operations	(61,842)	(16,055)	(85,579)	(20,248)
Interest expense, net	(641)	(167)	(1,500)	(222)
Foreign currency transaction loss	(676)	(308)	(1,457)	(526)
Loss before income tax benefit (provision)	(63,159)	(16,530)	(88,536)	(20,996)
Income tax benefit (provision)	20	63	(232)	(60)
Net loss	$ (63,139)	$ (16,467)	$ (88,768)	$ (21,056)

[(1)] Includes stock-based compensation as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Cost of revenue:				
Subscription	$ 2,061	$ 344	$ 4,016	$ 668
Services	313	75	617	152
Sales and marketing	13,811	1,088	19,670	1,930
Research and development	10,631	1,153	14,490	1,931
General and administrative	26,208	1,446	30,241	2,257
	$ 53,024	$ 4,106	$ 69,034	$ 6,938

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Cost of revenue:				
Subscription	$ 24	$ —	$ 24	$ —
Services	1	—	1	—
Sales and marketing	65	59	77	146
Research and development	77	24	104	117
General and administrative	86	138	183	353
	$ 253	$ 221	$ 389	$ 616

[(3)] Includes depreciation expense as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Cost of revenue:				
Subscription	$ 286	$ 249	$ 606	$ 512
Services	41	38	86	81
Sales and marketing	633	524	1,317	1,098
Research and development	397	277	756	582
General and administrative	235	183	473	378
	$ 1,592	$ 1,271	$ 3,238	$ 2,651

[(4)] Includes acquisition-related expense as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Cost of revenue:				
Subscription	$ 23	$ —	$ 61	$ —
Sales and marketing	—	—	7	—
Research and development	283	41	546	41
General and administrative	242	2,174	1,035	2,284
	$ 548	$ 2,215	$ 1,649	$ 2,325

General and administrative also includes acquisition-related earnout of $0.1 million and $3.9 million for the three months ended June 30, 2022 and 2021, respectively, and $0.2 million and $4.2 million for the six months ended June 30, 2022 and 2021, respectively. The acquisition-related earnout was an expense for both the three and six months ended June 30, 2022 and 2021 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 legal reserve of $4.2 million for the three and six months ended June 30, 2021.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(as a percentage of total revenue)			
Revenue:				
Subscription	95 %	94 %	95 %	93 %
Services	4	4	4	5
License	1	2	1	2
Total revenue	100	100	100	100
Cost of revenue:				
Cost of subscription (exclusive of amortization expense shown below)	18	16	18	16
Cost of services (exclusive of amortization expense shown below)	3	3	3	3
Amortization expense	4	3	5	3
Total cost of revenue	25	22	26	22
Gross profit	75	78	74	78
Operating expenses:				
Sales and marketing	51	38	47	37
Research and development	29	20	26	20
General and administrative	42	32	33	26
Amortization expense	6	7	6	7
Total operating expenses	128	97	112	90
Loss from operations	(53)	(19)	(38)	(12)
Interest expense, net	(1)	—	(1)	—
Foreign currency transaction loss	(1)	—	(1)	(1)
Loss before income tax benefit (provision)	(55)	(19)	(40)	(13)
Income tax benefit (provision)	—	—	—	—
Net loss	(55)%	(19)%	(40)%	(13)%

Comparison of the Three and Six Months Ended June 30, 2022 and 2021

Revenue

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2022	2021	$	%	2022	2021	$	%
	(in thousands, except percentages)							
SaaS subscription and support and maintenance	$ 104,291	$ 72,121	$ 32,170	45 %	$ 200,641	$ 138,897	$ 61,744	44 %
On-premise subscription	5,116	8,597	(3,481)	(40)	10,967	16,303	(5,336)	(33)
Subscription revenue	109,407	80,718	28,689	36	211,608	155,200	56,408	36
Professional services	5,027	3,929	1,098	28	8,971	7,932	1,039	13
Perpetual licenses	1,204	1,591	(387)	(24)	3,317	3,833	(516)	(13)
Non-subscription revenue	6,231	5,520	711	13	12,288	11,765	523	4
Total revenue	$ 115,638	$ 86,238	$ 29,400	34 %	$ 223,896	$ 166,965	$ 56,931	34 %

Total revenue increased by $29.4 million, or 34%, for the three months ended June 30, 2022 compared to the three months ended June 30, 2021. Overall revenue increased as a result of higher subscription revenue. Subscription revenue accounted for 95% of total revenue for the three months ended June 30, 2022 compared to 94% for the three months ended June 30, 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.

Total revenue increased by $56.9 million, or 34%, for the six months ended June 30, 2022 compared to the six months ended June 30, 2021. Overall revenue increased as a result of higher subscription revenue. Subscription revenue accounted for 95% of total revenue for the six months ended June 30, 2022 compared to 93% for the six months ended June 30, 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

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2022	2021	$	%	2022	2021	$	%
	(in thousands, except percentages)							
Cost of revenue:								
Cost of subscription (exclusive of amortization expense shown below)	$ 20,634	$ 13,875	$ 6,759	49 %	$ 40,536	$ 25,889	$ 14,647	57 %
Cost of services (exclusive of amortization expense show below)	3,493	2,607	886	34	6,600	5,072	1,528	30
Amortization expense	5,265	2,860	2,405	84	10,483	5,637	4,846	86
Total cost of revenue	$ 29,392	$ 19,342	$ 10,050	52 %	$ 57,619	$ 36,598	$ 21,021	57 %
Gross margin	75%	78%			74%	78%		

Cost of revenue increased by $10.1 million, or 52%, for the three months ended June 30, 2022 compared to the three months ended June 30, 2021 driven by an increase in cost of subscription revenue and amortization expense. Cost of subscription revenue increased $6.8 million, or 49%, primarily due to a $3.5 million increase in employee compensation costs related to higher headcount to support the growth in our subscription customer base and the Wandera acquisition, a $1.7 million increase in stock-based compensation expense and related payroll taxes, and a $1.4 million increase in third party hosting fees as we increased capacity to support our growth and the Wandera acquisition. Cost of services revenue increased $0.9 million, or 34%, as a result of higher employee compensation costs and stock-based compensation expense. Amortization expense increased $2.4 million, or 84%, primarily reflecting the increase in intangible assets due to the Wandera acquisition.

Cost of revenue increased by $21.0 million, or 57%, for the six months ended June 30, 2022 compared to the six months ended June 30, 2021 driven by an increase in cost of subscription revenue and amortization expense. Cost of subscription revenue increased $14.6 million, or 57%, primarily due to a $6.0 million increase in employee compensation costs related to higher headcount to support the growth in our subscription customer base and the Wandera acquisition, a $4.6 million increase in third party hosting fees as we increased capacity to support our growth and the Wandera acquisition, and a $3.4

million increase in stock-based compensation expense and related payroll taxes. Cost of services revenue increased $1.5 million, or 30%, as a result of higher employee compensation costs and stock-based compensation expense. Amortization expense increased $4.8 million, or 86%, primarily reflecting the increase in intangible assets due to the Wandera acquisition.

Total gross margin was 75% and 78% for the three months ended June 30, 2022 and 2021, respectively, and 74% and 78% for the six months ended June 30, 2022 and 2021, respectively. The decline in total gross margin was due to the increase in total cost of revenue described above as well as an impact to revenue due to a change in revenue recognition related to our Jamf Connect product resulting from updates to how we deliver the product.

Operating Expenses

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2022	2021	$	%	2022	2021	$	%
	(in thousands, except percentages)							
Operating expenses:								
Sales and marketing	$ 58,750	$ 32,617	$ 26,133	80 %	$ 105,075	$ 62,784	$ 42,291	67 %
Research and development	33,983	17,203	16,780	98	58,785	32,829	25,956	79
General and administrative	48,321	27,508	20,813	76	73,933	43,752	30,181	69
Amortization expense	7,034	5,623	1,411	25	14,063	11,250	2,813	25
Operating expenses	$ 148,088	$ 82,951	$ 65,137	79 %	$ 251,856	$ 150,615	$ 101,241	67 %

Sales and Marketing. Sales and marketing expenses increased by $26.1 million, or 80%, for the three months ended June 30, 2022 compared to the three months ended June 30, 2021 primarily due to an $8.8 million increase in employee compensation costs driven by higher headcount due to growth in the business and the Wandera acquisition, a $12.7 million increase in stock-based compensation expense and related payroll taxes, a $2.7 million increase in marketing costs, a $0.9 million increase in travel-related expenses, and a $0.4 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 the modification of return target options in the second quarter of 2022 and an increase in expense related to RSU awards.

Sales and marketing expenses increased by $42.3 million, or 67%, for the six months ended June 30, 2022 compared to the six months ended June 30, 2021 primarily due to a $16.9 million increase in employee compensation costs driven by higher headcount due to growth in the business and the Wandera acquisition, a $17.7 million increase in stock-based compensation expense and related payroll taxes, a $3.9 million increase in marketing costs, a $1.6 million increase in travel-related expenses, and a $1.1 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 the modification of return target options in the second quarter of 2022 and an increase in expense related to RSU awards.

Research and Development. Research and development expenses increased by $16.8 million, or 98%, for the three months ended June 30, 2022 compared to the three months ended June 30, 2021 primarily due to a $6.2 million increase in employee compensation costs driven by higher headcount due to growth in the business and the Wandera acquisition, a $9.5 million increase in stock-based compensation expense and related payroll taxes, and a $0.4 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 the modification of return target options in the second quarter of 2022 and an increase in expense related to RSU awards.

Research and development expenses increased by $26.0 million, or 79%, for the six months ended June 30, 2022 compared to the six months ended June 30, 2021 primarily due to an $11.7 million increase in employee compensation costs driven by higher headcount due to growth in the business and the Wandera acquisition, a $12.5 million increase in stock-based compensation expense and related payroll taxes, and a $0.8 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 the modification of return target options in the second quarter of 2022 and an increase in expense related to RSU awards.

General and Administrative. General and administrative expenses increased by $20.8 million, or 76%, for the three months ended June 30, 2022 compared to the three months ended June 30, 2021. The increase was primarily due to a $3.4 million increase in employee compensation costs driven by higher headcount to support our continued growth and the Wandera acquisition, a $24.7 million increase in stock-based compensation expense and related payroll taxes, and a $0.6 million increase in computer hardware and software costs to support the growth of the business, partially offset by a $4.2 million decrease in legal reserve, a $3.8 million decrease in acquisition-related earnout, a $1.9 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 the modification of return target options in the second quarter of 2022 and an increase in expense related to RSU awards.

General and administrative expenses increased by $30.2 million, or 69%, for the six months ended June 30, 2022 compared to the six months ended June 30, 2021. The increase was primarily due to a $7.9 million increase in employee compensation costs driven by higher headcount to support our continued growth and the Wandera acquisition, a $27.8 million increase in stock-based compensation expense and related payroll taxes, and a $1.2 million increase in computer hardware and software costs to support the growth of the business, partially offset by a $4.2 million decrease in legal reserve, a $4.0 million decrease in acquisition-related earnout, a $1.2 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 the modification of return target options in the second quarter of 2022 and an increase in expense related to RSU awards.

Amortization Expense. Amortization expense increased by $1.4 million, or 25%, for the three months ended June 30, 2022 compared to the three months ended June 30, 2021 primarily reflecting the increase in intangible assets due to the Wandera acquisition.

Amortization expense increased by $2.8 million, or 25%, for the six months ended June 30, 2022 compared to the six months ended June 30, 2021 primarily reflecting the increase in intangible assets due to the Wandera acquisition.

Interest Expense, Net

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2022	2021	$	%	2022	2021	$	%
	(in thousands, except percentages)							
Interest expense, net	$ 641	$ 167	$ 474	NM	$ 1,500	$ 222	$ 1,278	NM

NM Not Meaningful.

Interest expense, net increased by $0.5 million for the three months ended June 30, 2022 compared to the three months ended June 30, 2021 primarily reflecting interest charges and amortization of issuance costs on the 2026 Notes.

Interest expense, net increased by $1.3 million for the six months ended June 30, 2022 compared to the six months ended June 30, 2021 primarily reflecting interest charges and amortization of issuance costs on the 2026 Notes.

Foreign Currency Transaction Loss

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2022	2021	$	%	2022	2021	$	%
	(in thousands, except percentages)							
Foreign currency transaction loss	$ 676	$ 308	$ 368	NM	$ 1,457	$ 526	$ 931	NM

NM Not Meaningful.

Foreign currency transaction loss increased by $0.4 million for the three months ended June 30, 2022 compared to the three months ended June 30, 2021.

Foreign currency transaction loss increased by $0.9 million for the six months ended June 30, 2022 compared to the six months ended June 30, 2021 primarily due to foreign currency transaction loss attributable to Wandera, which we acquired in the third quarter of 2021.

Income Tax Benefit (Provision)

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2022	**2021**	**$**	**%**	**2022**	**2021**	**$**	**%**
	(in thousands, except percentages)							
Income tax benefit (provision)	$ 20	$ 63	$ (43)	(68)%	$ (232)	$ (60)	$ (172)	NM

NM Not Meaningful.

The effective tax rates for the three months ended June 30, 2022 and 2021 were 0.0% and 0.4%, respectively. The Company's annual effective tax rates for the three months ended June 30, 2022 and 2021 were 1.4% and (0.5)%, respectively.

The effective tax rate for both the six months ended June 30, 2022 and 2021 was (0.3)%. The effective tax rate for the six months ended June 30, 2022 was impacted by $1.5 million of discrete income tax expense.

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 condensed 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 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.

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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Gross profit	$ 86,246	$ 66,896	$ 166,277	$ 130,367
Amortization expense	5,265	2,860	10,483	5,637
Stock-based compensation	2,374	419	4,633	820
Acquisition-related expense	23	—	61	—
Payroll taxes related to stock-based compensation	25	—	25	—
Non-GAAP gross profit	$ 93,933	$ 70,175	$ 181,479	$ 136,824
Gross profit margin	75%	78%	74%	78%
Non-GAAP gross profit margin	81%	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 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 reserve. 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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Operating loss	$ (61,842)	$ (16,055)	$ (85,579)	$ (20,248)
Amortization expense	12,299	8,483	24,546	16,887
Stock-based compensation	53,024	4,106	69,034	6,938
Acquisition-related expense	548	2,215	1,649	2,325
Acquisition-related earnout	100	3,937	188	4,237
Offering costs	124	594	124	594
Payroll taxes related to stock-based compensation	253	221	389	616
Legal reserve	—	4,200	—	4,200
Non-GAAP operating income	$ 4,506	$ 7,701	$ 10,351	$ 15,549
Operating loss margin	(53)%	(19)%	(38)%	(12)%
Non-GAAP operating income margin	4%	9%	5%	9%

Non-GAAP Net Income

We use non-GAAP net income to understand and evaluate our operating performance and trends. We define non-GAAP net income as net loss, 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 reserve, 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 reserve.

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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Net loss	$ (63,139)	$ (16,467)	$ (88,768)	$ (21,056)
Exclude: Income tax benefit (provision)	20	63	(232)	(60)
Loss before income tax benefit (provision)	(63,159)	(16,530)	(88,536)	(20,996)
Amortization expense	12,299	8,483	24,546	16,887
Stock-based compensation	53,024	4,106	69,034	6,938
Foreign currency transaction loss	676	308	1,457	526
Amortization of debt issuance costs	679	—	1,358	—
Acquisition-related expense	548	2,215	1,649	2,325
Acquisition-related earnout	100	3,937	188	4,237
Offering costs	124	594	124	594
Payroll taxes related to stock-based compensation	253	221	389	616
Legal reserve	—	4,200	—	4,200
Non-GAAP income before income taxes	4,544	7,534	10,209	15,327
Non-GAAP provision for income taxes [1]	(1,090)	(1,808)	(2,450)	(3,678)
Non-GAAP net income	$ 3,454	$ 5,726	$ 7,759	$ 11,649

[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. net operating loss 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 reserve.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Net loss	$ (63,139)	$ (16,467)	$ (88,768)	$ (21,056)
Interest expense, net	641	167	1,500	222
(Benefit) provision for income taxes	(20)	(63)	232	60
Depreciation expense	1,592	1,271	3,238	2,651
Amortization expense	12,299	8,483	24,546	16,887
Stock-based compensation	53,024	4,106	69,034	6,938
Foreign currency transaction loss	676	308	1,457	526
Acquisition-related expense	548	2,215	1,649	2,325
Acquisition-related earnout	100	3,937	188	4,237
Offering costs	124	594	124	594
Payroll taxes related to stock-based compensation	253	221	389	616
Legal reserve	—	4,200	—	4,200
Adjusted EBITDA	$ 6,098	$ 8,972	$ 13,589	$ 18,200

Liquidity and Capital Resources

General

As of June 30, 2022, our principal sources of liquidity were cash and cash equivalents totaling $182.3 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 8 to the condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q. Our cash equivalents are comprised of money market funds and/or U.S. Treasuries 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.

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 June 30, 2022, we had deferred revenue of $317.0 million, of which $249.4 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 June 30, 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 our 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.

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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 as well as our debt service requirements for at least the next 12 months and to meet our 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.

In the second quarter of 2022, the Company entered into an amended contractual agreement with an unrelated party for hosting services, which included a non-cancelable commitment from the Company of $100.0 million over the next three years. Any remaining commitments under the prior agreement were terminated upon the commencement date of the amended agreement. There have been no other material changes to our commitments as disclosed in our Annual Report on Form 10-K for the year ended December 31, 2021.

Cash Flows

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

	Six Months Ended June 30,	
	2022	**2021**
	(in thousands)	
Net cash provided by operating activities	$ 16,342	$ 38,022
Net cash used in investing activities	(6,978)	(8,230)
Net cash (used in) provided by financing activities	(3,375)	2,084
Effect of exchange rate changes on cash and cash equivalents	(790)	(259)
Net increase in cash and cash equivalents	5,199	31,617
Cash and cash equivalents, beginning of period	177,150	194,868
Cash and cash equivalents, end of period	$ 182,349	$ 226,485
Cash paid for interest	$ 371	$ 6
Cash paid for purchases of equipment and leasehold improvements	2,876	5,211

Operating Activities

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

For the six months ended June 30, 2022, net cash provided by operating activities was $16.3 million reflecting our net loss of $88.8 million, adjusted for non-cash charges of $109.7 million and net cash outflows of $4.6 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, non-cash lease expense, and amortization of debt issuance costs. The primary drivers of net cash outflows from changes in operating assets and liabilities included an increase of $17.9 million in trade accounts receivable due to higher sales and the timing of cash receipts from our customers, an increase of $15.4 million in deferred contract costs due to an increase in capitalized costs, an increase of $3.9 million in prepaid expenses and other assets, and a decrease of $2.8 million in accounts payable and accrued liabilities. These changes were partially offset by an increase of $35.2 million in deferred revenue due to growth in subscription revenues.

For the six months ended June 30, 2021, net cash provided by operating activities was $38.0 million reflecting our net loss of $21.1 million, adjusted for non-cash charges of $39.0 million and net cash inflows of $20.1 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, amortization of deferred contract costs, non-cash lease expense, share-based compensation, and a $4.3 million adjustment to our Digita earnout. The primary drivers of net cash inflows from changes in operating assets and liabilities included an increase of $32.6 million in deferred revenue due to growth in subscription revenues and a decrease in trade accounts receivable of $2.2 million due to timing of cash receipts from our customers and higher collections. These changes were partially offset by an increase of $11.8 million in deferred contract costs due to an increase in capitalized costs and an increase of $3.0 million in prepaid expenses and other assets.

Investing Activities

During the six months ended June 30, 2022, net cash used in investing activities was $7.0 million driven by cash paid for two acquisitions of $4.0 million and purchases of $2.9 million in equipment and leasehold improvements.

During the six months ended June 30, 2021, net cash used in investing activities was $8.2 million driven by purchases of $5.2 million in equipment and leasehold improvements primarily reflecting updates to office space and hardware and software and the acquisition of cmdReporter for $3.0 million.

Financing Activities

Net cash used in financing activities of $3.4 million during the six months ended June 30, 2022 was primarily due to $4.6 million paid for contingent consideration associated with the Digita acquisition, partially offset by proceeds of $1.5 million from the exercise of stock options.

Net cash provided by financing activities of $2.1 million during the six months ended June 30, 2021 was primarily due to proceeds of $7.1 million from the exercise of stock options, partially offset by $4.2 million paid for contingent consideration associated with the Digita acquisition, $0.5 million paid for debt issuance costs, and $0.2 million paid for offering costs.

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 our Annual Report on Form 10-K for the year ended December 31, 2021. 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 condensed consolidated balance sheets, condensed consolidated statements of operations and comprehensive loss, or condensed consolidated statements of cash flows.

Critical Accounting Estimates

Our discussion and analysis of financial condition and results of operations are based upon our condensed 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.

There have been no material changes to our critical accounting estimates disclosed in our Annual Report on Form 10-K for the year ended December 31, 2021. For more information, refer to “Note 2 — Summary of significant accounting policies” to the condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

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 condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There were no material changes to our quantitative and qualitative disclosures about market risk during the six months ended June 30, 2022. See Part II, Item 7A, “Quantitative and Qualitative Disclosures About Market Risk” of our Annual Report on Form 10-K for the year ended December 31, 2021 for a detailed discussion of our market risks.

Item 4. 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 June 30, 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 June 30, 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 unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q present fairly, in all material respects, our financial position, results of operations, and cash flows for the periods presented in conformity with GAAP.

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.

In connection with the preparation of our financial statements for the quarter ended June 30, 2021, we identified misstatements in our accounting related to certain commissions that were incorrectly capitalized in prior periods. The misstatements resulted from a deficiency in the controls over the commissions process. We did not design or maintain effective controls to identify commissions that should have been expensed as incurred rather than capitalized in accordance with GAAP. Specifically, we did not have controls over (i) the communication of commission plan changes between the sales and accounting teams to identify and correctly account for commission plan changes in the financial statements and (ii) reviewing the evaluation of various terms in the commission plans to the relevant accounting guidance. As a result, sales and marketing expenses were understated and deferred contract costs were overstated in prior periods. This material weakness resulted in the revision of our previously issued consolidated financial statements as of and for the years ended December 31, 2020, 2019, and 2018 and for each of the quarters during the years ended December 31, 2020 and 2019 and the quarter ended March 31, 2021.

Our management is committed to remediating this material weakness and has implemented several steps to enhance our internal controls and commissions processes. 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 have implemented changes in our processes and internal controls in 2022 with the continued intention of remediation later this year. 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 corrective actions. Until the material weakness is remediated, we are continuing to perform additional analyses and other procedures to ensure that our consolidated financial statements are prepared in accordance with GAAP.

Changes in Internal Control

Except for the remediation measures implemented in connection with the material weakness described above, there have been no changes in internal control over financial reporting during the quarter ended June 30, 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.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

The information set forth in “Note 7 — Commitments and contingencies” to the condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q 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 1A. Risk Factors

This quarterly report should be read in conjunction with the risk factors included in our Annual Report on Form 10-K for the year ended December 31, 2021. There have been no material changes to the risk factors disclosed in Part 1, Item 1A “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2021.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

The following is a list of all exhibits filed or furnished as part of this report:

Exhibit Number	Description
3.1	Second Amended and Restated Certificate of Incorporation of Jamf Holding Corp. (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed with the Commission on July 27, 2020).
3.2	Amended and Restated Bylaws of Jamf Holding Corp. (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K filed with the Commission on July 27, 2020).
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, furnished herewith.
32.2*	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, furnished herewith.
101.INS	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
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 Quarterly Report on Form 10-Q 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.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

JAMF HOLDING CORP. (Registrant)

Date: August 4, 2022	By:	/s/ Ian Goodkind
		Ian Goodkind
		Chief Accounting Officer (Principal Accounting Officer)

Exhibit 31.1

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Dean Hager, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Jamf Holding Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 4, 2022

/s/ Dean Hager

Dean Hager
Director and Chief Executive Officer

Exhibit 31.2

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jill Putman, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Jamf Holding Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 4, 2022

/s/ Jill Putman

Jill Putman
Chief Financial Officer

Exhibit 32.1

Certification of the Chief Executive Officer

Pursuant to Rule 18 U.S.C. Section 1350

In connection with the Quarterly Report on Form 10-Q of Jamf Holding Corp. (the “Company”) for the period ended June 30, 2022, as filed with the U.S. Securities and Exchange Commission (the “Report”), I, Dean Hager, Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 4, 2022

/s/ Dean Hager

Dean Hager
Director and Chief Executive Officer

Exhibit 32.2

Certification of the Chief Financial Officer

Pursuant to Rule 18 U.S.C. Section 1350

In connection with the Quarterly Report on Form 10-Q of Jamf Holding Corp. (the “Company”) for the period ended June 30, 2022, as filed with the U.S. Securities and Exchange Commission (the “Report”), I, Jill Putman, Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 4, 2022

/s/ Jill Putman

Jill Putman
Chief Financial Officer