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 March 31, 2023

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 001-38600

TENABLE HOLDINGS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**47-5580846**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

6100 Merriweather Drive, Columbia, Maryland 21044
(Address of principal executive offices, including zip code)

(410) 872-0555
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	TENB	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 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	☐		
Emerging growth company	☐	Smaller reporting 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 ☒

The number of shares of the Registrant's common stock outstanding as of April 28, 2023 was 114,833,241.

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Where You Can Find More Information

Investors and others should note that we may announce material business and financial information to our investors using our investor relations website (https://investors.tenable.com), our filings with the Securities and Exchange Commission (SEC), our website, webcasts, press releases, and conference calls. We use these mediums, including our website, to communicate with investors and the general public about our company, our products, and other issues, and for complying with our disclosure obligations under Regulation FD. It is possible that the information that we make available on our website may be deemed to be material information. We therefore encourage investors and others interested in our company to review the information that we make available on our website, in addition to following our SEC filings, our webcasts, press releases, and conference calls. The information we post through these channels is not a part of this Quarterly Report on Form 10-Q. These channels be may updated from time to time on our investor relations website.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

TENABLE HOLDINGS, INC.
CONSOLIDATED BALANCE SHEETS

(in thousands, except per share data)	March 31, 2023 (unaudited)	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	$ 360,434	$ 300,866
Short-term investments	256,253	266,569
Accounts receivable (net of allowance for doubtful accounts of $447 and $1,400 at March 31, 2023 and December 31, 2022, respectively)	123,855	187,341
Deferred commissions	44,045	44,270
Prepaid expenses and other current assets	66,466	58,121
Total current assets	851,053	857,167
Property and equipment, net	45,092	46,726
Deferred commissions (net of current portion)	64,335	67,238
Operating lease right-of-use assets	37,377	38,495
Acquired intangible assets, net	72,296	75,376
Goodwill	316,520	316,520
Other assets	36,604	38,008
Total assets	$ 1,423,277	$ 1,439,530
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 21,872	$ 18,722
Accrued compensation	36,786	52,620
Deferred revenue	490,076	502,115
Operating lease liabilities	5,958	5,821
Other current liabilities	5,259	4,882
Total current liabilities	559,951	584,160
Deferred revenue (net of current portion)	151,992	162,487
Term loan, net of issuance costs (net of current portion)	361,287	361,970
Operating lease liabilities (net of current portion)	51,088	52,611
Other liabilities	7,280	7,436
Total liabilities	1,131,598	1,168,664
Stockholders' equity:		
Common stock (par value: $0.01; 500,000 shares authorized; 114,743 and 113,056 shares issued and outstanding at March 31, 2023 and December 31, 2022, respectively)	1,147	1,131
Additional paid-in capital	1,063,051	1,017,837
Accumulated other comprehensive loss	(671)	(1,351)
Accumulated deficit	(771,848)	(746,751)
Total stockholders' equity	291,679	270,866
Total liabilities and stockholders' equity	$ 1,423,277	$ 1,439,530

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

TENABLE HOLDINGS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

	Three Months Ended March 31,	
(in thousands, except per share data)	**2023**	**2022**
Revenue	$ 188,839	$ 159,368
Cost of revenue	45,506	34,930
Gross profit	143,333	124,438
Operating expenses:		
Sales and marketing	97,191	81,570
Research and development	38,183	34,290
General and administrative	27,115	26,126
Total operating expenses	162,489	141,986
Loss from operations	(19,156)	(17,548)
Interest income	5,095	250
Interest expense	(7,339)	(3,576)
Other expense, net	(547)	(944)
Loss before income taxes	(21,947)	(21,818)
Provision for income taxes	3,150	2,688
Net loss	$ (25,097)	$ (24,506)
Net loss per share, basic and diluted	$ (0.22)	$ (0.22)
Weighted-average shares used to compute net loss per share, basic and diluted	113,791	109,524

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

TENABLE HOLDINGS, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Unaudited)

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Net loss	$ (25,097)	$ (24,506)
Other comprehensive income (loss), net of tax:		
Unrealized gains (losses) on available-for-sale securities	680	(1,057)
Other comprehensive income (loss)	680	(1,057)
Comprehensive loss	$ (24,417)	$ (25,563)

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

TENABLE HOLDINGS, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
(in thousands)	**Shares**	**Amount**				
Balance at December 31, 2022	113,056	$ 1,131	$ 1,017,837	$ (1,351)	$ (746,751)	$ 270,866
Exercise of stock options	80	1	941	—	—	942
Vesting of restricted stock units	1,243	11	(11)	—	—	—
Vesting of performance stock units	52	1	(1)	—	—	—
Issuance of common stock under employee stock purchase plan	312	3	9,911	—	—	9,914
Stock-based compensation	—	—	34,374	—	—	34,374
Other comprehensive income	—	—	—	680	—	680
Net loss	—	—	—	—	(25,097)	(25,097)
Balance at March 31, 2023	114,743	$ 1,147	$ 1,063,051	$ (671)	$ (771,848)	$ 291,679
Balance at December 31, 2021	108,929	$ 1,089	$ 869,059	$ (306)	$ (654,529)	$ 215,313
Exercise of stock options	293	3	2,584	—	—	2,587
Vesting of restricted stock units	809	8	(8)	—	—	—
Issuance of common stock under employee stock purchase plan	256	3	8,879	—	—	8,882
Stock-based compensation	—	—	25,749	—	—	25,749
Other comprehensive loss	—	—	—	(1,057)	—	(1,057)
Net loss	—	—	—	—	(24,506)	(24,506)
Balance at March 31, 2022	110,287	$ 1,103	$ 906,263	$ (1,363)	$ (679,035)	$ 226,968

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

TENABLE HOLDINGS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Cash flows from operating activities:		
Net loss	$ (25,097)	$ (24,506)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization	6,365	4,896
Stock-based compensation	34,117	25,398
Other	(1,556)	1,323
Changes in operating assets and liabilities:		
Accounts receivable	64,439	40,341
Prepaid expenses and other assets	(2,776)	8,463
Accounts payable, accrued expenses and accrued compensation	(12,665)	(18,745)
Deferred revenue	(22,534)	(3,543)
Other current and noncurrent liabilities	(1,547)	(765)
Net cash provided by operating activities	38,746	32,862
Cash flows from investing activities:		
Purchases of property and equipment	(387)	(2,007)
Capitalized software development costs	(1,023)	(2,804)
Purchases of short-term investments	(48,749)	(60,850)
Sales and maturities of short-term investments	61,299	55,135
Business combinations, net of cash acquired	—	(22,960)
Net cash provided by (used in) investing activities	11,140	(33,486)
Cash flows from financing activities:		
Payments on term loan	(938)	(938)
Proceeds from stock issued in connection with the employee stock purchase plan	9,914	8,882
Proceeds from the exercise of stock options	942	2,587
Other financing activities	(128)	(3)
Net cash provided by financing activities	9,790	10,528
Effect of exchange rate changes on cash and cash equivalents and restricted cash	(108)	(449)
Net increase in cash and cash equivalents and restricted cash	59,568	9,455
Cash and cash equivalents and restricted cash at beginning of period	300,866	278,271
Cash and cash equivalents and restricted cash at end of period	$ 360,434	$ 287,726
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 6,820	$ 4,051
Cash paid for income taxes, net of refunds	3,233	4,320
Supplemental cash flow information related to leases:		
Cash payments for operating leases	$ 2,238	$ 750

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

TENABLE HOLDINGS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Business and Summary of Significant Accounting Policies

Business Description

Tenable Holdings, Inc. (the “Company,” “we,” "us," or “our”) is a provider of exposure management solutions, which is an effective discipline for managing, measuring and comparing cybersecurity risk in today's complex IT environments. Our solutions provide broad visibility into security issues such as vulnerabilities, misconfigurations, internal and regulatory compliance violations and other indicators of the state of an organization’s security across IT infrastructure and applications, cloud environments, Active Directory and industrial internet of things and operational technology environments.

Basis of Presentation

The accompanying consolidated financial statements include the accounts of Tenable Holdings, Inc. and our wholly owned subsidiaries and have been prepared in conformity with United States generally accepted accounting principles (“GAAP”) for interim financial information. All intercompany accounts and transactions have been eliminated in consolidation.

The consolidated statements are unaudited and should be read in conjunction with the consolidated financial statements and related notes included in our 2022 Annual Report on Form 10-K ("10-K") filed with the Securities and Exchange Commission on February 24, 2023. The consolidated financial statements have been prepared on a basis consistent with the audited annual consolidated financial statements included in the 10-K and, in the opinion of management, include all adjustments of a normal recurring nature necessary to fairly state our financial position, our results of operations, and cash flows.

The results for the three months ended March 31, 2023 are not necessarily indicative of the operating results expected for the year ending December 31, 2023 or any other future period.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. These estimates include, but are not limited to, the determination of the estimated economic life of perpetual licenses for revenue recognition, the estimated period of benefit for deferred commissions, the useful lives of long-lived assets, the fair value of acquired intangible assets, the valuation of stock-based compensation, the incremental borrowing rate for operating leases, and the valuation of deferred tax assets and investments. We base these estimates on historical experience and on various other assumptions that we believe to be reasonable. Actual results could differ significantly from these estimates.

Significant Accounting Policies

Our significant accounting policies are described in our 10-K. During the three months ended March 31, 2023, there were no material changes to our significant accounting policies from those described in our 10-K.

2. Revenue

Disaggregation of Revenue

The following table presents a summary of revenue:

(in thousands)	Three Months Ended March 31, 2023	2022
Subscription revenue	$ 171,098	$ 142,687
Perpetual license and maintenance revenue	12,181	12,873
Professional services and other revenue	5,560	3,808
Revenue	$ 188,839	$ 159,368

Concentrations

We sell and market our products and services through our field sales force that works closely with our channel partners, which includes a network of distributors and resellers, in developing sales opportunities. We use a two-tiered channel model whereby we sell our products and services to our distributors, which in turn sell to resellers, which then sell to end-users. We derived 93% and 92% of revenue through our channel network in the three months ended March 31, 2023 and 2022, respectively. One of our distributors accounted for 37% of revenue in the three months ended March 31, 2023 and 2022. That same distributor accounted for 32% and 36% of accounts receivable at March 31, 2023 and December 31, 2022, respectively.

Contract Balances

We generally bill our customers in advance and accounts receivable are recorded when we have the right to invoice the customer. Contract liabilities consist of deferred revenue and include customer billings and payments received in advance of performance under the contract. In the three months ended March 31, 2023 and 2022, we recognized revenue of $174.0 million and $142.7 million, respectively, that was included in the deferred revenue balance at the beginning of each of the respective periods.

Remaining Performance Obligations

At March 31, 2023, the future estimated revenue related to unsatisfied performance obligations was $654.7 million, of which approximately 76% is expected to be recognized as revenue over the succeeding twelve months, and the remainder is expected to be recognized over the four years thereafter.

Deferred Commissions

The following summarizes the activity of deferred incremental costs of obtaining a contract:

(in thousands)	Three Months Ended March 31, 2023	2022
Beginning balance	$ 111,508	$ 99,949
Capitalization of contract acquisition costs	8,907	10,330
Amortization of deferred contract acquisition costs	(12,035)	(11,016)
Ending balance	$ 108,380	$ 99,263

3. Cash Equivalents and Short-Term Investments

The following tables summarize the amortized cost, unrealized gain and loss and estimated fair value of cash equivalents and short-term investments:

	March 31, 2023			
(in thousands)	**Amortized Cost**	**Unrealized Gain**	**Unrealized Loss**	**Estimated Fair Value**
Cash equivalents				
Money market funds	$ 223,314	$ —	$ —	$ 223,314
Total cash equivalents	$ 223,314	$ —	$ —	$ 223,314
Short-term investments				
Commercial paper	$ 126,278	$ —	$ (155)	$ 126,123
Corporate bonds	44,465	19	(147)	44,337
Asset backed securities	25,266	2	(122)	25,146
Certificates of deposit	10,000	—	—	10,000
Supranational bonds	4,006	—	(22)	3,984
Yankee bond	4,026	—	(33)	3,993
U.S. Treasury and agency obligations	42,883	34	(247)	42,670
Total short-term investments	$ 256,924	$ 55	$ (726)	$ 256,253

	December 31, 2022			
(in thousands)	**Amortized Cost**	**Unrealized Gain**	**Unrealized Loss**	**Estimated Fair Value**
Cash equivalents				
Money market funds	$ 201,476	$ —	$ —	$ 201,476
Total cash equivalents	$ 201,476	$ —	$ —	$ 201,476
Short-term investments				
Commercial paper	$ 144,093	$ 2	$ (377)	$ 143,718
Corporate bonds	37,778	—	(194)	37,584
Asset backed securities	19,723	11	(161)	19,573
Certificates of deposit	10,000	—	—	10,000
Supranational bonds	4,017	—	(67)	3,950
U.S. Treasury and agency obligations	52,309	—	(565)	51,744
Total short-term investments	$ 267,920	$ 13	$ (1,364)	$ 266,569

We considered the extent to which any unrealized losses on our short-term investments were driven by credit risk and other factors, including market risk, and if it is more-likely-than-not that we would have to sell the security before the recovery of the amortized cost basis. At March 31, 2023 and December 31, 2022, our unrealized losses were due to rising market interest rates compared to when the investments were initiated. We do not believe any unrealized losses represent credit losses, and it is unlikely we would sell the investments before we would recover their amortized cost basis.

The contractual maturities of our short-term investments are as follows:

(in thousands)	March 31, 2023 Amortized Cost	March 31, 2023 Estimated Fair Value	December 31, 2022 Amortized Cost	December 31, 2022 Estimated Fair Value
Due within one year	$ 209,171	$ 208,574	$ 243,430	$ 242,129
Due between one and two years	47,753	47,679	24,490	24,440
Total short-term investments	$ 256,924	$ 256,253	$ 267,920	$ 266,569

At March 31, 2023 and December 31, 2022, cash and cash equivalents included $5.8 million of restricted cash primarily related to collateral for our outstanding letters of credit.

4. Fair Value Measurements

We measure certain financial instruments at fair value using a fair value hierarchy. In the hierarchy, assets are classified based on the lowest level inputs used in valuation into the following categories:

- *Level 1* — Quoted prices in active markets for identical assets and liabilities;
- *Level 2* — Observable inputs including quoted market prices for similar assets and liabilities in active markets, quoted prices for identical assets and liabilities in inactive markets, or inputs that are corroborated by observable market data; and
- *Level 3* — Unobservable inputs.

The following tables summarize assets that are measured at fair value on a recurring basis:

	March 31, 2023			
(in thousands)	Level 1	Level 2	Level 3	Total
Cash equivalents				
Money market funds	$ 223,314	$ —	$ —	$ 223,314
Total cash equivalents	$ 223,314	$ —	$ —	$ 223,314
Short-term investments				
Commercial paper	$ —	$ 126,123	$ —	$ 126,123
Corporate bonds	—	44,337	—	44,337
Asset backed securities	—	25,146	—	25,146
Certificates of deposit	—	10,000	—	10,000
Supranational bonds	—	3,984	—	3,984
Yankee bond	—	3,993	—	3,993
U.S. Treasury and agency obligations	—	42,670	—	42,670
Total short-term investments	$ —	$ 256,253	$ —	$ 256,253

(in thousands)	December 31, 2022 Level 1	Level 2	Level 3	Total
Cash equivalents				
Money market funds	$ 201,476	$ —	$ —	$ 201,476
Total cash equivalents	$ 201,476	$ —	$ —	$ 201,476
Short-term investments				
Commercial paper	$ —	$ 143,718	$ —	$ 143,718
Corporate bonds	—	37,584	—	37,584
Asset backed securities	—	19,573	—	19,573
Certificates of deposit	—	10,000	—	10,000
Supranational bonds	—	3,950	—	3,950
U.S. Treasury and agency obligations	—	51,744	—	51,744
Total short-term investments	$ —	$ 266,569	$ —	$ 266,569

At March 31, 2023 and December 31, 2022, we had $15.0 million of non-marketable simple agreements for future equity ("SAFE") investments with privately held companies, which are included in other assets on our consolidated balance sheets. We record our SAFE investments at cost, less any impairment, plus or minus observable price changes for similar investments of the same issuer. No material events impacted the carrying value of our SAFE investments in the three months ended March 31, 2023 or 2022.

We did not have any liabilities measured and recorded at fair value on a recurring basis at March 31, 2023 and December 31, 2022.

5. Property and Equipment, Net

Property and equipment, net consisted of the following:

(in thousands)	March 31, 2023	December 31, 2022
Computer software and equipment	$ 21,964	$ 21,676
Internally developed software	24,760	23,479
Furniture and fixtures	5,940	5,940
Leasehold improvements	28,273	28,214
Right-of-use assets under finance leases	748	748
Total	81,685	80,057
Less: accumulated depreciation and amortization	(36,593)	(33,331)
Property and equipment, net	$ 45,092	$ 46,726

Depreciation and amortization related to property and equipment was $3.3 million and $2.5 million in the three months ended March 31, 2023 and 2022, respectively.

6. Goodwill and Intangible Assets

At March 31, 2023 and December 31, 2022, our goodwill balance was $316.5 million.

Acquired intangible assets subject to amortization are as follows:

	March 31, 2023			December 31, 2022		
(in thousands)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Acquired technology	$ 97,037	$ (24,781)	$ 72,256	$ 97,037	$ (21,738)	$ 75,299
Trade name	490	(450)	40	490	(413)	77
	$ 97,527	$ (25,231)	$ 72,296	$ 97,527	$ (22,151)	$ 75,376

Amortization of acquired intangible assets was $3.1 million and $2.4 million in the three months ended March 31, 2023 and 2022, respectively. At March 31, 2023, our acquired intangible assets are expected to be amortized over an estimated weighted average period of 6.5 years.

At March 31, 2023, estimated future amortization of acquired intangible assets is as follows:

(in thousands)	
Year ending December 31,	
2023[(1)]	$ 9,172
2024	12,175
2025	12,175
2026	11,990
2027	9,960
Thereafter	16,824
Total	$ 72,296

(1) Represents the nine months ending December 31, 2023.

7. Leases

We have operating leases for office facilities. The components of lease expense were as follows:

	Three Months Ended March 31,	
(in thousands)	2023	2022
Operating lease cost	$ 1,888	$ 1,817

Rent expense for short-term leases in the three months ended March 31, 2023 and 2022 was not material.

Supplemental information related to leases was as follows:

	March 31, 2023	December 31, 2022
Operating leases		
Weighted average remaining lease term	8.0 years	8.2 years
Weighted average discount rate	5.6%	5.6%

In the three months ended March 31, 2023 and 2022, we did not obtain any right-of-use assets in exchange for lease liabilities.

Maturities of operating lease liabilities at March 31, 2023 were as follows:

(in thousands)		
Year ending December 31,		
2023[(1)]	$	6,652
2024		9,267
2025		9,029
2026		8,337
2027		7,856
Thereafter		30,264
Total lease payments		71,405
Less: Imputed interest		(14,359)
Total	$	57,046

(1) Represents the nine months ending December 31, 2023.

8. Debt

Credit Agreement

In July 2021, we entered into a credit agreement ("Credit Agreement") which is comprised of:

- a $375.0 million senior secured term loan facility ("Term Loan"); and
- a $50.0 million senior secured revolving credit facility ("Revolving Credit Facility").

The table below summarizes the carrying value of the Term Loan:

(in thousands)		**March 31, 2023**
Term loan	$	370,312
Less: Unamortized debt discount and issuance costs		(6,313)
Term loan, net of issuance costs		363,999
Less: Term loan, net, current [(1)]		(2,712)
Term loan, net of issuance costs (net of current portion)	$	361,287

(1) Term loan, net current is included in other current liabilities on our consolidated balance sheets.

The Term Loan bears interest at a rate of 2.75% per annum over LIBOR, subject to a 0.50% floor. The Term Loan is being amortized at 1% per annum in equal quarterly installments until the final payment of $350.6 million on the July 7, 2028 maturity date.

Our Term Loan is recorded at its carrying value. At March 31, 2023, the fair value of our Term Loan was approximately $365.7 million. In the fair value hierarchy, our Term Loan is classified as Level 2 as it is traded in less active markets.

The maturities of the Term Loan at March 31, 2023 were as follows:

(in thousands)		
Year ending December 31,		
2023[1]	$	2,812
2024		3,750
2025		3,750
2026		3,750
2027		3,750
Thereafter		352,500
Total	$	370,312

(1) Represents the nine months ending December 31, 2023.

We may be subject to mandatory Term Loan prepayments related to the excess cash flow provisions beginning in 2023. These prepayments would only be required if our first lien net leverage ratio (as defined in our Credit Agreement) exceeds 3.5 at the end of each year, and at March 31, 2023, our first lien net leverage ratio was below that threshold.

The Revolving Credit Facility bears interest at a rate, depending on first lien net leverage, ranging from 2.00% to 2.50% over LIBOR and matures on July 7, 2026. Additionally, we pay a commitment fee during the term ranging from 0.25% to 0.375% per annum of the average daily undrawn portion of the revolving commitments based on the first lien net leverage ratio. The Revolving Credit Facility contains a $15.0 million letter of credit sublimit. At March 31, 2023, we had $0.2 million of standby letters of credit outstanding under our Revolving Credit Facility related to one of our operating leases. At March 31, 2023, we were in compliance with the covenants under the Credit Agreement.

9. Commitments and Contingencies

Commitments

In July 2021, we entered into a contract with Amazon Web Services, Inc. ("AWS") for cloud services from August 2021 through July 2024. Under the terms of the contract, we committed to spend $43.7 million, $46.8 million and $50.1 million in contract years one, two and three, respectively, for a total of $140.6 million. If we do not meet the minimum purchase obligation during any of those years, we will be required to pay the difference. At March 31, 2023, we have met our commitments for both the first and second years of our contract with AWS.

Letters of Credit

At March 31, 2023, we had $5.7 million of standby letters of credit related to our grant agreements with the State of Maryland and our operating leases.

10. Stock-Based Compensation

Under the evergreen provision in our 2018 Equity Incentive Plan, in January 2023 we reserved an additional 5.7 million shares of our common stock. At March 31, 2023, there were 23.9 million shares available for grant.

Stock-based compensation expense included in the consolidated statements of operations was as follows:

	Three Months Ended March 31,	
(in thousands)	2023	2022
Cost of revenue	$ 2,625	$ 1,513
Sales and marketing	14,394	10,065
Research and development	8,865	6,463
General and administrative	8,233	7,357
Total stock-based compensation expense	$ 34,117	$ 25,398

At March 31, 2023, the unrecognized stock-based compensation expense related to unvested restricted stock units ("RSUs") was $353.9 million, which is expected to be recognized over an estimated remaining weighted average period of 3.0 years.

At March 31, 2023, the unrecognized stock-based compensation expense related to unvested performance stock units ("PSUs") was $10.8 million, which is expected to be recognized over an estimated remaining weighted average period of 3.6 years.

At March 31, 2023, the unrecognized stock-based compensation expense related to our 2018 ESPP was $11.7 million, which is expected to be recognized over an estimated weighted average period of 0.8 years.

RSUs and PSUs

A summary of our RSU and PSU activity is presented below:

	RSUs		PSUs	
(in thousands, except for per share data)	**Number of Shares**	**Weighted Average Grant Date Fair Value**	**Number of Shares**	**Weighted Average Grant Date Fair Value**
Unvested balance at December 31, 2022	6,894	$ 43.26	196	$ 44.97
Granted	3,178	43.40	188	43.24
Performance adjustment[(1)]	—	—	12	44.97
Vested	(1,243)	42.49	(52)	44.97
Forfeited	(123)	44.06	—	—
Unvested balance at March 31, 2023	8,706	43.41	344	44.02

(1) Represents adjustments due to the achievement of predefined financial performance targets.

Stock Options

A summary of our stock option activity is presented below:

(in thousands, except for exercise prices and years)	**Number of Shares**	**Weighted Average Exercise Price**	**Weighted-Average Remaining Contractual Term (in years)**	**Aggregate Intrinsic Value**
Outstanding at December 31, 2022	5,485	$ 8.96	4.5	$ 160,135
Granted	—	—		
Exercised	(80)	11.72		2,541
Forfeited/canceled	—	—		
Outstanding and exercisable at March 31, 2023	5,405	8.91	4.2	208,600

2018 Employee Stock Purchase Plan

Under the evergreen provision in our 2018 Employee Stock Purchase Plan ("2018 ESPP"), in January 2023 we reserved an additional 1.7 million shares of our common stock. At March 31, 2023, there were 8.9 million shares reserved for issuance under our 2018 ESPP.

In the three months ended March 31, 2023, employees purchased 311,614 shares of our common stock at a weighted average price of $31.82 per share, resulting in $9.9 million of cash proceeds. At March 31, 2023, there was $2.1 million of employee contributions to the 2018 ESPP included in accrued compensation.

The fair value of the 2018 ESPP purchase rights was estimated on the offering or modification dates using a Black-Scholes option-pricing model and the following assumptions:

	Three Months Ended March 31,	
	2023	2022
Expected term (in years)	0.5 — 2.0	0.5 — 2.0
Expected volatility	51.0% — 58.1%	42.8% — 51.7%
Risk-free interest rate	4.8% — 5.0%	0.1%
Expected dividend yield	—	—

11. Income Taxes

In the three months ended March 31, 2023, the provision for income taxes included $1.9 million of income taxes in foreign jurisdictions in which we conduct business and $1.3 million of discrete expense primarily related to withholding taxes on sales to customers.

In the three months ended March 31, 2022, the provision included $1.7 million of income taxes in foreign jurisdictions in which we conduct business, $0.8 million of current expense from the restructuring of our research and development operations in Israel, and is partially offset by $0.4 million of deferred tax benefits related to the Alsid acquisition. Additionally, the provision included $0.7 million of discrete expense, primarily withholding taxes on sales to customers.

12. Net Loss Per Share

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

	Three Months Ended March 31,	
(in thousands, except per share data)	**2023**	**2022**
Net loss	$ (25,097)	$ (24,506)
Weighted-average shares used to compute net loss per share, basic and diluted	113,791	109,524
Net loss per share, basic and diluted	$ (0.22)	$ (0.22)

The following potentially dilutive securities have been excluded from the diluted per share calculations because they would have been antidilutive:

	March 31,	
(in thousands)	**2023**	**2022**
RSUs	8,706	8,130
Stock options	5,405	6,381
Shares to be issued under the 2018 ESPP	78	47
PSUs	156	—
Total	14,345	14,558

13. Geographic Information

We operate as one operating segment. Our Chief Executive Officer, who is our chief operating decision maker, reviews financial information on a consolidated basis for purposes of making operating decisions, allocating resources and evaluating financial performance.

Revenue by region, based on the address of the end user as specified in our subscription, license or service agreements, was as follows:

(in thousands)	Three Months Ended March 31, 2023	Three Months Ended March 31, 2022
The Americas	$ 119,284	$ 99,500
Europe, Middle East and Africa	48,259	43,139
Asia Pacific	21,296	16,729
Revenue	$ 188,839	$ 159,368

Customers located in the United States accounted for 56% of revenue in the three months ended March 31, 2023 and 2022. No other country accounted for 10% or more of revenue in the periods presented.

Our property and equipment, net by geographic area is summarized as follows:

(in thousands)	March 31, 2023	December 31, 2022
United States	$ 38,637	$ 39,843
International	6,455	6,883
Property and equipment, net	$ 45,092	$ 46,726

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with (1) our consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q, or this Form 10-Q, and (2) our consolidated financial statements, related notes and management's discussion and analysis of financial condition and results of operations in our Annual Report on Form 10-K for the year ended December 31, 2022, or the 10-K, filed with the Securities and Exchange Commission on February 24, 2023. This Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements are often identified by the use of words such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “project,” “will,” “would” or the negative or plural of these words or similar expressions or variations. Such forward-looking statements are subject to a number of risks, uncertainties, assumptions and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified herein, and those discussed in the section titled “Risk Factors,” set forth in Part I, Item IA of the 10-K, in Part II, Item 1A of this Form 10-Q and in our other filings with the SEC. You should not rely upon forward-looking statements as predictions of future events. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Overview

We are a leading provider of exposure management solutions. Exposure management is an effective discipline for managing, measuring and comparing cybersecurity risk in today's complex IT environments.

In October 2022, we launched our Tenable One Exposure Management Platform, or Tenable One, which unifies a variety of data sources into a single exposure view to help organizations gain visibility, prioritize efforts and communicate cyber risks. Building on our existing products, Tenable One is designed to take advantage of the integrations that already exist with our partners and form the foundation of an exposure management program, alongside the other tools, such as endpoint detection and response and firewalls, and required business processes.

With Tenable One, organizations can translate technical data about assets, vulnerabilities and threats into clear business insights and actionable intelligence for security executives and practitioners. The platform combines broad, industry-leading vulnerability coverage in the industry, spanning IT assets, cloud resources, containers, web apps and identity systems. Tenable One builds on the speed and breadth of vulnerability coverage from Tenable Research and adds aggregated exposure view analytics, guidance on mitigating attack pathways and a centralized asset inventory.

Tenable One incorporates Tenable.io, Tenable.io Web Application Scanning, Tenable Lumin Exposure View, Tenable.cs, Tenable.ad and Tenable.asm. All of these products are also offered as standalone solutions, alongside Tenable.sc, Tenable.ot and Nessus.

Our platform offerings are primarily sold on a subscription basis with a one-year term. Our subscription terms are generally not longer than three years. These offerings are typically prepaid in advance. To a lesser extent, we recognize revenue ratably from perpetual licenses and from the related ongoing maintenance.

We sell and market our products and services through our field sales force that works closely with our channel partners, which includes a network of distributors and resellers, in developing sales opportunities. We use a two-tiered channel model whereby we sell our enterprise platform offerings to our distributors, which in turn sell to our resellers, which then sell to end users, which we call customers.

Revenue in the three months ended March 31, 2023 and 2022 was $188.8 million and $159.4 million, respectively, representing year-over-year growth of 18%. Our recurring revenue, which includes revenue from subscription arrangements for software (both revenue recognized ratably over the subscription term and upon delivery) and cloud-based solutions and maintenance associated with perpetual licenses, represented 95% of revenue in the three months ended March 31, 2023 and 2022. Our net loss in the three months ended March 31, 2023 and 2022 was $25.1 million and

$24.5 million, respectively, as we continue to invest in our business and market opportunity. Our cash flows from operating activities was $38.7 million and $32.9 million in the three months ended March 31, 2023 and 2022, respectively.

Financial Highlights

Below are our key financial results:

	Three Months Ended March 31,	
(in thousands, except per share data)	**2023**	**2022**
Revenue	$ 188,839	$ 159,368
Loss from operations	(19,156)	(17,548)
Net loss	(25,097)	(24,506)
Net loss per share, basic and diluted	(0.22)	(0.22)
Net cash provided by operating activities	38,746	32,862
Purchases of property and equipment	(387)	(2,007)
Capitalized software development costs	(1,023)	(2,804)

Key Operating and Financial Metrics

To supplement our consolidated financial statements, which are prepared and presented in accordance with GAAP, we use and monitor the following operating and financial metrics, which include non-GAAP financial measures, to understand and evaluate our core operating and financial performance.

Calculated Current Billings

We use the non-GAAP measure of calculated current billings, which we believe is a key metric to measure our periodic performance. Given that most of our customers pay in advance, we typically recognize a majority of the related revenue ratably over time. We use calculated current billings to measure and monitor our ability to provide our business with the working capital generated by upfront payments from our customers.

Calculated current billings consists of revenue recognized in a period plus the change in current deferred revenue in the corresponding period. We believe that calculated current billings, which excludes deferred revenue for periods beyond twelve months in a customer's contractual term, more closely correlates with annual contract value. Variability in total billings, depending on the timing of large multi-year contracts and the preference for annual billing versus multi-year upfront billing, may distort growth in one period over another.

Calculated current billings may vary from period-to-period for a number of reasons, and therefore has a number of limitations as a quarter-to-quarter or year-over-year comparative measure. Calculated current billings in any one period may be impacted by the timing and amount of new sales transactions, the timing and amount of renewal transactions, including early renewals, as well as the timing and amount of multi-year prepaid contracts, all of which could favorably or unfavorably impact quarter-to-quarter and year-over-year comparisons. For example, an increasing number of large sales transactions, for which the timing has and will continue to vary, may occur in quarters subsequent to or in advance of those that we anticipate. Additionally, our calculation of calculated current billings may be different from other companies that report similar financial measures. Because of these and other limitations, you should consider calculated current billings along with revenue and our other GAAP financial results.

The following table presents a reconciliation of revenue, the most directly comparable financial measure calculated in accordance with GAAP, to calculated current billings:

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Revenue	$ 188,839	$ 159,368
Deferred revenue (current), end of period	490,076	404,786
Deferred revenue (current), beginning of period[1]	(502,115)	(407,635)
Calculated current billings	$ 176,800	$ 156,519

(1) Deferred revenue (current), beginning of period for the three months ended March 31, 2022 includes $0.1 million related to acquired deferred revenue.

Free Cash Flow

We use the non-GAAP measure of free cash flow, which we define as GAAP net cash flows from operating activities reduced by purchases of property and equipment and capitalized software development costs. We believe free cash flow is an important liquidity measure of the cash (if any) that is available, after purchases of property and equipment and capitalized software development costs, for investment in our business and to make acquisitions. We believe that free cash flow is useful as a liquidity measure because it measures our ability to generate or use cash.

Our use of free cash flow has limitations as an analytical tool and you should not consider it in isolation or as a substitute for an analysis of our results under GAAP. First, free cash flow is not a substitute for net cash flows from operating activities. Second, other companies may calculate free cash flow or similarly titled non-GAAP financial measures differently or may use other measures to evaluate their performance, all of which could reduce the usefulness of free cash flow as a tool for comparison. Additionally, the utility of free cash flow is further limited as it does not reflect our future contractual commitments and does not represent the total increase or decrease in our cash balance for a given period. Because of these and other limitations, you should consider free cash flow along with net cash provided by operating activities and our other GAAP financial measures.

The following table presents a reconciliation of net cash provided by operating activities, the most directly comparable financial measure calculated in accordance with GAAP, to free cash flow:

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Net cash provided by operating activities	$ 38,746	$ 32,862
Purchases of property and equipment	(387)	(2,007)
Capitalized software development costs[1]	(1,023)	(2,804)
Free cash flow[2]	$ 37,336	$ 28,051

(1) Capitalized software development costs were previously included in purchases of property and equipment.
(2) Free cash flow for the periods presented was impacted by:

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Cash paid for interest and other financing costs	$ (6,820)	$ (4,051)
Employee stock purchase plan activity	(4,690)	(4,036)
Acquisition-related expenses	(238)	(728)
Costs related to intra-entity asset transfers	—	(838)
Tax payment on intra-entity asset transfers	—	(2,697)

Free cash flow for the three months ended March 31, 2022 was benefited by approximately $6 million from prepayments of software subscription costs, insurance and rent in prior quarters.

Customer Metrics

We believe that our customer base provides a significant opportunity to expand sales of our enterprise platform offerings. The following tables summarize key components of our customer base:

	Three Months Ended March 31,		
	2023	**2022**	**Change (%)**
Number of new enterprise platform customers added in period[1]	379	459	(17)%

(1) We define an enterprise platform customer as a customer that has licensed Tenable One, Tenable.io, Tenable.cs, Tenable.ad, Tenable.ot or Tenable.sc for an annual amount of $5,000 or greater. New enterprise platform customers represent new customer logos during the periods presented and do not include customer conversions from Nessus Expert to enterprise platforms.

	March 31,		
	2023	**2022**	**Change (%)**
Number of customers with $100,000 and greater in annual contract value at end of period	1,444	1,112	30%

Dollar-Based Net Expansion Rate

Our dollar-based net expansion rate reflects both our customer retention and ability to drive additional sales to our existing customers. Our dollar-based net expansion rate has historically fluctuated and is expected to continue to fluctuate on a quarterly basis as a result of a number of factors, including existing customers' satisfaction with our solutions, existing customer retention, the pricing of our solutions, the availability of competing solutions and the pricing thereof, and the timing of customer renewals. In addition, our sales pipeline opportunities vary from quarter to quarter between new customers and expansion from existing customers, and we do not prioritize one over the other to maximize the dollar-based net expansion rate.

Our dollar-based net expansion rate is evaluated on a last twelve months, or LTM, basis, and is calculated as follows:

- Denominator: To calculate our dollar-based net expansion rate as of the end of a reporting period, we first determine the annual recurring revenue, or ARR, from all active subscriptions (both revenue recognized ratably over the subscription term and upon delivery) and maintenance from perpetual licenses as of the last day of the same reporting period in the prior year. This represents recurring payments that we expect to receive in the next 12-month period from the cohort of customers that existed on the last day of the same reporting period in the prior year.

- Numerator: We measure the ARR for that same cohort of customers representing all subscriptions and maintenance from perpetual licenses based on customer orders as of the end of the reporting period.

We calculate dollar-based net expansion rate by dividing the numerator by the denominator.

The following table presents our dollar-based net expansion rate:

	March 31,	
(in thousands)	**2023**	**2022**
Dollar-based net expansion rate	113 %	118 %

Non-GAAP Income from Operations and Non-GAAP Operating Margin

We use non-GAAP income from operations along with non-GAAP operating margin as key indicators of our financial performance. We define these non-GAAP financial measures as their respective GAAP measures, excluding the effects of stock-based compensation, acquisition-related expenses, costs related to the intra-entity asset transfers resulting from the internal restructuring of legal entities and amortization of acquired intangible assets. Acquisition-related expenses include transaction expenses and costs related to the intercompany transfer of acquired intellectual property.

We believe that these non-GAAP financial measures provide useful information about our core operating results over multiple periods. There are a number of limitations related to the use of the non-GAAP financial measures as compared to GAAP loss from operations and operating margin, including that non-GAAP income from operations and non-GAAP operating margin exclude stock-based compensation expense, which has been, and will continue to be, a significant recurring expense in our business and an important part of our compensation strategy.

The following table presents a reconciliation of loss from operations, the most directly comparable financial measure calculated in accordance with GAAP, to non-GAAP income from operations, and operating margin, the most directly comparable financial measure calculated in accordance with GAAP, to non-GAAP operating margin:

	Three Months Ended March 31,	
(dollars in thousands)	**2023**	**2022**
Loss from operations	$ (19,156)	$ (17,548)
Stock-based compensation	34,117	25,398
Acquisition-related expenses	100	1,341
Costs related to intra-entity asset transfers[1]	—	838
Amortization of acquired intangible assets	3,080	2,427
Non-GAAP income from operations	$ 18,141	$ 12,456
Operating margin	(10)%	(11)%
Non-GAAP operating margin	10 %	8 %

(1) The costs related to the intra-entity asset transfers resulted from our internal restructuring of Cymptom.

Non-GAAP Net Income and Non-GAAP Earnings Per Share

We use non-GAAP net income, which excludes stock-based compensation, acquisition-related expenses and amortization of acquired intangible assets, as well as the related tax impacts, and the tax impact and related costs of intra-entity asset transfers resulting from the internal restructuring of legal entities as well as deferred income tax benefits recognized in connection with acquisitions, to calculate non-GAAP earnings per share. We believe that these non-GAAP measures provide important information because they facilitate comparisons of our core operating results over multiple periods.

The following table presents a reconciliation of net loss and net loss per share, the most comparable financial measures calculated in accordance with GAAP, to non-GAAP net income and non-GAAP earnings per share:

	Three Months Ended March 31,	
(in thousands, except for per share amounts)	**2023**	**2022**
Net loss	$ (25,097)	$ (24,506)
Stock-based compensation	34,117	25,398
Tax impact of stock-based compensation(1)	917	1,066
Acquisition-related expenses(2)	100	1,341
Costs related to intra-entity asset transfers(3)	—	838
Amortization of acquired intangible assets(4)	3,080	2,427
Tax impact of acquisitions(5)	(54)	(442)
Tax impact of intra-entity asset transfers(6)	—	843
Non-GAAP net income	$ 13,063	$ 6,965
Net loss per share, diluted	$ (0.22)	$ (0.22)
Stock-based compensation	0.30	0.23
Tax impact of stock-based compensation(1)	—	0.01
Acquisition-related expenses(2)	—	0.01
Costs related to intra-entity asset transfers(3)	—	0.01
Amortization of acquired intangible assets(4)	0.03	0.02
Tax impact of acquisitions(5)	—	(0.01)
Tax impact of intra-entity asset transfers(6)	—	0.01
Adjustment to diluted earnings per share(7)	—	—
Non-GAAP earnings per share, diluted	$ 0.11	$ 0.06
Weighted-average shares used to compute GAAP net loss per share, diluted	113,791	109,524
Weighted-average shares used to compute non-GAAP earnings per share, diluted	119,264	117,155

(1) The tax impact of stock-based compensation is based on the tax treatment for the applicable tax jurisdictions.

(2) The tax impact of acquisition-related expenses is not material.

(3) The costs related to the intra-entity asset transfers resulted from our internal restructuring of Cymptom.

(4) The tax impact of the amortization of acquired intangible assets is included in the tax impact of acquisitions.

(5) The tax impact of acquisitions for all periods presented includes the deferred tax benefits of the Alsid acquisition.

(6) The tax impact of the intra-entity transfers is related to current tax expense based on the applicable Israeli tax rates resulting from our internal restructuring of Cymptom.

(7) An adjustment to reconcile GAAP net loss per share, which excludes potentially dilutive shares, to non-GAAP earnings per share, which includes potentially dilutive shares.

Components of Our Results of Operations

Revenue

We generate revenue from subscription arrangements for our software and cloud-based solutions, perpetual licenses, maintenance associated with perpetual licenses and professional services.

Our subscription arrangements generally have annual or multi-year contractual terms to use our software or cloud-based solutions, including ongoing software updates during the contractual period. For software subscriptions that are dependent on ongoing software updates and the ability to identify the latest cybersecurity vulnerabilities, revenue is recognized ratably over the subscription term given the critical utility provided by the ongoing updates that are released through the contract period. When the critical utility of our software does not depend on ongoing updates, we recognize revenue attributable to the license at the time of delivery and the revenue attributable to the maintenance and support ratably over the contract period.

Our perpetual licenses are generally sold with one or more years of maintenance, which includes ongoing software updates. Given the critical utility provided by the ongoing software updates and updated ability to identify network vulnerabilities included in maintenance, we combine the perpetual license and the maintenance into a single performance obligation. Perpetual license arrangements generally contain a material right related to the customer’s ability to renew maintenance at a price that is less than the initial license fee. We apply a practical alternative to allocating a portion of the transaction price to the material right performance obligation and estimate a hypothetical transaction price which includes fees for expected maintenance renewals based on the estimated economic life of perpetual license contracts. We allocate the transaction price between the cybersecurity subscription provided in the initial contract and the material right related to expected contract renewals based on the hypothetical transaction price. We recognize the amount allocated to the combined license and maintenance performance obligation over the initial contractual period, which is generally one year. We recognize the amount allocated to the material right over the expected maintenance renewal period, which begins at the end of the initial contractual term and is generally four years. We have estimated the five-year economic life of perpetual license contracts based on historical contract attrition, expected renewal periods, the lifecycle of our technology and other factors. This estimate may change over time.

Professional services and other revenue is primarily comprised of advisory services and training related to the deployment and optimization of our products. These services do not result in significant customization of our products. Professional services and other revenue is recognized as the services are performed.

We have historically experienced, and expect in the future to experience, seasonality in entering into agreements with customers. We typically enter into a significantly higher percentage of agreements with new customers, as well as renewal agreements with existing customers, in the third and fourth quarters of the year. The increase in customer agreements in the third quarter is primarily attributable to U.S. government and related agencies, and the increase in the fourth quarter is primarily attributable to large enterprise account buying patterns typical in the software industry. The ratable nature of our subscription revenue makes this seasonality less apparent in our overall financial results. At the end of the first quarter of 2023, we experienced longer sales cycle times in the purchasing and approval phases of our sales cycle, and we expect this trend to continue in 2023.

Cost of Revenue, Gross Profit and Gross Margin

Cost of revenue includes personnel costs related to our technical support group that provides assistance to customers, including salaries, benefits, bonuses, payroll taxes, stock-based compensation and any severance. Cost of revenue also includes cloud infrastructure costs, the costs related to professional services and training, depreciation, amortization of acquired and developed technology, hardware costs and allocated overhead costs, which consist of information technology and facilities.

We intend to continue to invest additional resources in our cloud-based platform and customer support team as we grow our business. The level and timing of investment in these areas could affect our cost of revenue in the future.

Gross profit, or revenue less cost of revenue, and gross margin, or gross profit as a percentage of revenue, have been and will continue to be affected by various factors, including the timing of our acquisition of new customers and our renewals of and follow-on sales to existing customers, the costs associated with operating our cloud-based platform, the extent to which we expand our customer support team and the extent to which we can increase the efficiency of our technology and infrastructure through technological improvements.

We expect our gross profit to increase in absolute dollars but our gross margin may fluctuate from period to period depending on the interplay of all of these factors, particularly as it relates to cloud infrastructure costs, as we expect revenue from our cloud-based subscriptions to increase as a percentage of revenue.

Operating Expenses

Our operating expenses consist of sales and marketing, research and development and general and administrative expenses. Personnel costs are the most significant component of operating expenses and consist of salaries, benefits, bonuses, payroll taxes, stock-based compensation and any severance. Operating expenses also include depreciation and amortization as well as allocated overhead costs, including IT and facilities costs.

Sales and Marketing

Sales and marketing expense consists of personnel costs, sales commissions, marketing programs, travel and entertainment, expenses for conferences, meetings and events and allocated overhead costs. We capitalize sales commissions, including related fringe benefit costs, and recognize the expense over an estimated period of benefit, which ranges between three and four years for subscription arrangements and five years for perpetual license arrangements. Sales commissions on contract renewals are capitalized and amortized ratably over the contract term, with the exception of contracts with renewal periods that are one year or less, in which case the incremental costs are expensed as incurred. Sales commissions on professional services arrangements are expensed as incurred as the contractual periods of these arrangements are generally less than one year.

We intend to continue to make investments in our sales and marketing teams to increase revenue, further penetrate the market and expand our global customer base. We expect our sales and marketing expense to increase in absolute dollars annually and to be our largest operating expense category for the foreseeable future. However, as our revenue increases, we expect our sales and marketing expense to decrease as a percentage of our revenue over the long term. Our sales and marketing expense may fluctuate from period to period due to the timing and extent of these expenses, including sales commissions, which may fluctuate depending on the mix of sales and related expense recognition.

Research and Development

Research and development expense consists of personnel costs, software used to develop our products, travel and entertainment, consulting and professional fees for third-party development resources as well as allocated overhead. Our research and development expense supports our efforts to continue to add capabilities to our existing products and enable the continued detection of new network vulnerabilities.

We expect our research and development expense to continue to increase annually in absolute dollars for the foreseeable future as we continue to invest in research and development efforts to enhance the functionality of our cloud-based platform. However, we expect our research and development expense to decrease as a percentage of our revenue over the long term, although our research and development expense may fluctuate from period to period due to the timing and extent of these expenses.

General and Administrative

General and administrative expense consists of personnel costs for our executive, finance, legal, human resources and administrative departments. Additional expenses include travel and entertainment, professional fees, insurance, allocated overhead, and acquisition-related costs.

We expect our general and administrative expense to continue to increase annually in absolute dollars for the foreseeable future due to additional costs associated with accounting, compliance, insurance and investor relations as a public company. However, we expect our general and administrative expense to decrease as a percentage of our revenue over the long term, although our general and administrative expense may fluctuate from period to period due to the timing and extent of these expenses.

Interest Income, Interest Expense and Other Expense, Net

Interest income consists of income earned on cash and cash equivalents and short-term investments. Interest expense consists primarily of interest expense in connection with our senior secured term loan facility, or Term Loan, unused commitment fees on our senior secured revolving credit facility, or Revolving Credit Facility, and letter of credit fees. Other expense, net consists primarily of foreign currency remeasurement and transaction gains and losses.

Provision for Income Taxes

Provision for income taxes consists of income taxes in all foreign jurisdictions in which we conduct business and the related withholding taxes on sales with customers. We have recorded deferred tax assets for which a full valuation allowance has been provided, including net operating loss carryforwards and tax credits. We expect to maintain this full valuation allowance for the foreseeable future as it is more likely than not that some or all of those deferred tax assets may not be realized based on our history of losses.

Results of Operations

The following tables set forth our consolidated results of operations for the periods presented:

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Revenue	$ 188,839	$ 159,368
Cost of revenue(1)	45,506	34,930
Gross profit	143,333	124,438
Operating expenses:		
Sales and marketing(1)	97,191	81,570
Research and development(1)	38,183	34,290
General and administrative(1)	27,115	26,126
Total operating expenses	162,489	141,986
Loss from operations	(19,156)	(17,548)
Interest income	5,095	250
Interest expense	(7,339)	(3,576)
Other expense, net	(547)	(944)
Loss before income taxes	(21,947)	(21,818)
Provision for income taxes	3,150	2,688
Net loss	$ (25,097)	$ (24,506)

(1) Includes stock-based compensation expense as follows:

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Cost of revenue	$ 2,625	$ 1,513
Sales and marketing	14,394	10,065
Research and development	8,865	6,463
General and administrative	8,233	7,357
Total stock-based compensation expense	$ 34,117	$ 25,398

Comparison of the Three Months Ended March 31, 2023 and 2022

Revenue

The following table presents the increase in revenue:

	Three Months Ended March 31,		Change	
(dollars in thousands)	**2023**	**2022**	**($)**	**(%)**
Subscription revenue	$ 171,098	$ 142,687	$ 28,411	20 %
Perpetual license and maintenance revenue	12,181	12,873	(692)	(5)%
Professional services and other revenue	5,560	3,808	1,752	46 %
Revenue	$ 188,839	$ 159,368	$ 29,471	18 %

The increase in revenue of $29.5 million included $28.7 million from existing customers at April 1, 2022 and $0.8 million from new customers. U.S. revenue increased $16.3 million, or 18%. International revenue increased $13.2 million, or 19%.

Cost of Revenue, Gross Profit and Gross Margin

	Three Months Ended March 31,		Change	
(dollars in thousands)	**2023**	**2022**	**($)**	**(%)**
Cost of revenue	$ 45,506	$ 34,930	$ 10,576	30 %
Gross profit	143,333	124,438	18,895	15 %
Gross margin	76 %	78 %		

The increase in cost of revenue of $10.6 million was primarily due to:

- a $4.8 million increase in personnel costs, largely associated with an increase in headcount and a $1.1 million increase in stock-based compensation as well as support for cloud-based products;
- a $3.7 million increase in third-party cloud infrastructure costs;
- a $0.7 million increase in amortization of intangible assets due to acquired intangible assets;
- a $0.5 million increase in depreciation and amortization expenses;
- a $0.3 million increase in the cost of goods;
- a $0.2 million increase in professional fees; and
- a $0.2 million increase in allocated overhead.

Operating Expenses

Sales and Marketing

	Three Months Ended March 31,		Change	
(dollars in thousands)	**2023**	**2022**	**($)**	**(%)**
Sales and marketing	$ 97,191	$ 81,570	$ 15,621	19 %

The increase in sales and marketing expense of $15.6 million was primarily due to:

- a $9.0 million increase in personnel costs, largely associated with an increase in headcount and a $4.3 million increase in stock-based compensation;
- a $5.9 million increase in selling expenses, including a $5.5 million increase in travel and meeting costs; and

- a $1.0 million increase in expenses for demand generation programs, including advertising, sponsorships and brand awareness efforts; partially offset by
- a $0.4 million decrease in sales commissions.

Research and Development

	Three Months Ended March 31,		Change	
(dollars in thousands)	**2023**	**2022**	**($)**	**(%)**
Research and development	$ 38,183	$ 34,290	$ 3,893	11 %

The increase in research and development expense of $3.9 million was primarily due to:

- a $3.0 million increase in personnel costs, largely associated with an increase in headcount and a $2.4 million increase in stock-based compensation;
- a $1.7 million increase in third-party cloud infrastructure costs; partially offset by
- a $0.8 million increase in tax credits.

General and Administrative

	Three Months Ended March 31,		Change	
(dollars in thousands)	**2023**	**2022**	**($)**	**(%)**
General and administrative	$ 27,115	$ 26,126	$ 989	4 %

The increase in general and administrative expense of $1.0 million was primarily due to:

- a $1.4 million increase in personnel costs, largely associated with an increase in headcount and a $0.9 million increase in stock-based compensation;
- a $0.6 million increase in indirect taxes such as VAT;
- a $0.2 million increase in allocated overhead;
- a $0.2 million increase in travel and meeting costs; and
- a $0.2 million increase in professional fees; partially offset by
- a $1.2 million decrease in acquisition-related expenses; and
- a $0.8 million decrease in intra-entity asset transfer costs related to Cymptom.

Interest Income, Interest Expense and Other Expense, Net

	Three Months Ended March 31,		Change	
(dollars in thousands)	**2023**	**2022**	**($)**	**(%)**
Interest income	$ 5,095	$ 250	$ 4,845	1,938 %
Interest expense	(7,339)	(3,576)	(3,763)	105 %
Other expense, net	(547)	(944)	397	(42)%

The $4.8 million increase in interest income was due to higher interest rates on an increased amount of short-term investments and cash and cash equivalents. Interest expense increased $3.8 million primarily due to an increase in the interest rate on our Term Loan. Other expense, net decreased $0.4 million primarily due to an decrease in foreign exchange losses.

Provision for Income Taxes

	Three Months Ended March 31,		Change	
(dollars in thousands)	**2023**	**2022**	**($)**	**(%)**
Provision for income taxes	$ 3,150	$ 2,688	$ 462	17 %

In the three months ended March 31, 2023, the provision for income taxes included:

- $1.9 million of income taxes in foreign jurisdictions in which we conduct business; and
- $1.3 million of discrete expense primarily related to withholding taxes on sales to customers.

In the three months ended March 31, 2022, the provision for income taxes included:

- $1.7 million income taxes in foreign jurisdictions in which we conduct business;
- $0.8 million of current expense from the restructuring of our research and development operations in Israel; and
- $0.7 million of discrete expense primarily related to withholding taxes on sales to customers; partially offset by
- a $0.4 million deferred tax benefit related to the Alsid acquisition.

Liquidity and Capital Resources

At March 31, 2023, we had $360.4 million of cash and cash equivalents, which consisted of bank deposits and money market funds, and $256.3 million of short-term investments, which consisted of commercial paper, asset backed securities, certificates of deposit, U.S. Treasury and agency obligations and corporate, Yankee and supranational bonds.

Since our inception, we have primarily financed our operations through cash provided by operations, including payments received from customers using our software products and services. Prior to our IPO, we did not raise any primary institutional capital, and the proceeds of our Series A and Series B redeemable convertible preferred stock financings were used to repurchase shares of capital stock from former stockholders. We have generated significant operating losses as reflected by our accumulated deficit of $771.8 million at March 31, 2023.

We typically invoice our customers annually in advance and, to a lesser extent, multi-years in advance. Therefore, a substantial source of our cash is from such prepayments, which are included in deferred revenue on our consolidated balance sheets. Deferred revenue consists primarily of the unearned portion of billed fees for our subscriptions and perpetual licenses, which is subsequently recognized as revenue in accordance with our revenue recognition policy. At March 31, 2023, we had deferred revenue of $642.1 million, of which $490.1 million was recorded as a current liability and is expected to be recognized as revenue in the next 12 months, provided all other revenue recognition criteria are met.

Our principal uses of cash in recent periods have been funding our operations, expansion of our sales and marketing and research and development activities, investments in infrastructure, and acquiring complementary businesses and technology. We may in the future enter into arrangements to acquire or invest in other complementary businesses, services and technologies, including intellectual property rights.

We expect to continue incurring operating losses in the near term. Even though we generated positive cash flows from operations and free cash flow in the three months ended March 31, 2023, we may not be able to sustain these cash flows. We believe that our existing cash and cash equivalents and short-term investments will be sufficient to fund our operating and capital needs for at least the next 12 months and for the foreseeable future. Our future capital requirements will depend on many factors, including our revenue growth rate, subscription renewal activity, the timing and extent of spending to support further infrastructure and research and development efforts, the timing and extent of additional capital expenditures to invest in new and existing office spaces, the expansion of sales and marketing and international operating activities, any acquisitions of complementary businesses and technologies, the timing of our introduction of new product capabilities and enhancements of our platform and the continuing market acceptance of our platform. It may be necessary to seek additional equity or debt financing to fund our operating and capital needs. In the event that financing is required from outside sources, we may not be able to raise it on terms acceptable to us or at all. If we are unable to raise additional capital when desired, or if we cannot expand our operations or otherwise capitalize on our business opportunities because we lack sufficient capital, our business, operating results and financial condition would be adversely affected.

Term Loan and Revolving Credit Facility

In July 2021, we entered into a credit agreement, or the Credit Agreement, which is comprised of a $375.0 million Term Loan and a $50.0 million Revolving Credit Facility, with a $15.0 million letter of credit sublimit. The Term Loan bears variable interest at a rate of 2.75% per annum over LIBOR, subject to a 0.50% floor. From January 2022 through July 2022, July 2022 through October 2022, October 2022 through January 2023 and January 2023 through April 2023, interest rates on our Term Loan were 3.27%, 5.56%, 7.16% and 7.58%, respectively. Effective April 28, 2023 through May 30, 2023, the Term Loan has an interest rate of 7.77%. The Term Loan is being amortized at 1% per annum in equal quarterly installments until the final payment of $350.6 million on the July 7, 2028 maturity date. We may be subject to mandatory Term Loan prepayments related to the excess cash provisions in the Credit Agreement beginning in 2023. The prepayments related to excess cash flow provisions apply if our first lien net leverage ratio (as defined in the Credit Agreement) exceeds 3.5, and at March 31, 2023, our first lien net leverage ratio was below that threshold.

The Revolving Credit Facility bears interest at a rate, depending on first lien net leverage, ranging from 2.00% to 2.50% over LIBOR and matures on July 7, 2026. We pay a commitment fee during the term ranging from 0.25% to 0.375% per annum of the average daily undrawn portion of the revolving commitments based on the first lien net leverage ratio. The Credit Agreement contains customary representations and warranties and affirmative and negative covenants. Additionally, if at least 35% of the Revolving Credit Facility is drawn on the last day of the quarter, the total net leverage ratio cannot be greater than 5.50 to 1.00. At March 31, 2023, we were in compliance with the covenants and had $0.2 million of standby letters of credit outstanding under the Revolving Credit Facility.

Cash Flows

The following table summarizes our cash flows for the periods presented:

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Net cash provided by operating activities	$ 38,746	$ 32,862
Net cash provided by (used in) investing activities	11,140	(33,486)
Net cash provided by financing activities	9,790	10,528
Effect of exchange rate changes on cash and cash equivalents and restricted cash	(108)	(449)
Net increase in cash and cash equivalents and restricted cash	$ 59,568	$ 9,455

Operating Activities

Our largest source of cash provided by operating activities is cash collections from sales of our products and services, as we typically invoice our customers in advance. Our primary uses of cash are employee compensation costs, third-party cloud infrastructure and other software subscription costs, demand generation expenditures and general corporate costs.

Investing Activities

Net cash provided by investing activities increased by $44.6 million, primarily due to a $23.0 million decrease in cash paid for acquisitions, an $18.3 million net increase in sales of short-term investments, a $1.8 million decrease in capitalized software development costs and a $1.6 million decrease in purchases of property and equipment.

Financing Activities

Net cash provided by financing activities decreased by $0.7 million, primarily due to a $1.6 million decrease in proceeds from the exercise of stock options which was partially offset by a $1.0 million increase in proceeds from stock issued in connection with our employee stock purchase plan.

Contractual Obligations

We have certain contractual obligations for future payments. Refer to Note 7 to our consolidated financial statements for our required operating lease payments and Note 9 for our required payments to Amazon Web Services, Inc. for cloud services.

At March 31, 2023, there were no other material changes in our contractual obligations and commitments from those disclosed in our 10-K.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, as well as related disclosures. We evaluate our estimates and assumptions on an ongoing basis. Our estimates are based on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Our actual results could differ from these estimates.

There have been no material changes to our critical accounting policies and estimates as described in our 10-K.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risks in the ordinary course of our business, including interest rate, foreign currency exchange and inflation risks.

Interest Rate Risk

At March 31, 2023, we had $360.4 million of cash and cash equivalents, which consisted of cash deposits and money market funds. We also had $256.3 million of short-term investments, which consisted of commercial paper, asset backed securities, certificates of deposit, U.S. treasury and agency securities and corporate, Yankee and supranational bonds. Our investments are carried at their fair market values with cumulative unrealized gains or losses recorded as a component of accumulated other comprehensive loss within stockholders' equity. The primary objectives of our investment activities are the preservation of capital, the fulfillment of liquidity needs and the fiduciary control of cash and investments. We do not enter into investments for trading or speculative purposes. Interest-earning instruments carry a degree of interest rate risk; however, a hypothetical 10% change in interest rates during any of the periods presented would not have had a material impact on our financial statements.

In July 2021, we entered into the Credit Agreement comprised of a $375.0 million Term Loan and a $50.0 million Revolving Credit Facility. From January 2022 through July 2022, July 2022 through October 2022, October 2022 through January 2023 and January 2023 through April 2023, interest rates on our Term Loan were 3.27%, 5.56%, 7.16% and 7.58%, respectively. Effective April 28, 2023 through May 30, 2023, the Term Loan has an interest rate of 7.77%. A one percentage point increase in the rate would increase 2023 interest expense by $2.2 million.

Because the United Kingdom Financial Conduct Authority, which regulates LIBOR, announced the desire to phase out the use of LIBOR by the middle of 2023, our borrowings in the second half of 2023 are expected to be subject to the Secured Overnight Financing Rate, or SOFR, under the terms our Term Loan and Revolving Credit Facility.

Foreign Currency Exchange Risk

Substantially all of our sales contracts are denominated in U.S. dollars, with a limited number of contracts denominated in foreign currencies, including foreign denominated leases. A portion of our operating expenses are incurred outside the United States, denominated in foreign currencies and subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the Euro, British Pound, Australian dollar, Israeli New Shekel and Indian Rupee. Strengthening of the U.S. dollar compared to other currencies could result in lower international sales as our products would seem more expensive and could result in lower international operating costs as the U.S. dollar is the functional currency for all of our international subsidiaries. Additionally, fluctuations in foreign currency exchange rates may cause us to recognize remeasurement and transaction gains (losses) in our consolidated statements of operations. As the impact of foreign currency exchange rates has not been material to our historical operating results, we have not entered into derivative or hedging transactions, but we may do so in the future if our exposure to foreign currencies becomes more significant.

Inflation Risk

While we do not believe that inflation has had a material effect on our business, results of operations, or financial condition through March 31, 2023, our costs, specifically employee-related and third-party cloud infrastructure costs, may become subject to significant inflationary pressures, and our inability or failure to fully offset such higher costs could harm our business, results of operations, or financial condition.

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 ensure that information required to be disclosed by a company in the reports that it files or submits 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 ensure that information required to be disclosed by a company in the reports that it files or submits 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 Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of the end of the period covered by this Form 10-Q. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that at March 31, 2023, our disclosure controls and procedures were effective to provide reasonable assurance that the information required to be disclosed by us in this Form 10-Q was (a) reported within the time periods specified by SEC rules and regulations, and (b) communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding any required disclosure.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting identified in management's evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act during the period covered by this Quarterly Report on Form 10-Q that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Internal Controls

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs. Our management, including our Chief Executive Officer and Chief Financial Officer, believes that our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives and are effective at the reasonable assurance level. However, our management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we may be subject to legal proceedings and claims in the ordinary course of business. We are not presently a party to any legal proceedings that, if determined adversely to us, would individually or taken together have a material adverse effect on our business, results of operations, financial condition or cash flows. We have received, and may in the future continue to receive, claims from third parties asserting, among other things, infringement of their intellectual property rights. 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

There have been no material changes to the risk factors disclosed in Part 1, Item 1A. "Risk Factors" of our of our Annual Report on Form 10-K for the year ended December 31, 2022 filed with the United States Securities and Exchange Commission ("SEC") on February 24, 2023. Our business is subject to risks and events that, if they occur, could adversely affect our financial condition and results of operations and trading price of our securities. In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the factors described in Part I, Item 1A. “Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2022. We may disclose changes to risk factors or disclose additional factors from time to time in our future filings with the SEC. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations.

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

Unregistered Sales of Equity Securities

None.

Use of Proceeds

None.

Items 3, 4 and 5 are not applicable and have been omitted.

Item 6. Exhibits

The following is a list of Exhibits filed as part of this Quarterly Report on Form 10-Q:

Exhibit Number	Description	Location
3.1	Amended and Restated Certificate of Incorporation of Tenable Holdings, Inc.	Previously filed as Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-38600) on July 30, 2018
3.2	Amended and Restated Bylaws of Tenable Holdings, Inc.	Previously filed as Exhibit 3.4 to the Company's Registration Statement on Form S-1 (File No. 333-226002) on June 29, 2018
4.1	Common Stock Certificate of Tenable Holdings, Inc.	Previously filed as Exhibit 4.1 to the Company's Registration Statement on Form S-1 (File No. 333-226002) on July 16, 2018
31.1	Certification of the Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith
31.2	Certification of the Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith
32.1*	Certification of the Principal Executive Officer and the Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	Furnished herewith
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 with applicable taxonomy extension information contained in Exhibits 101.SCH, 101.CAL, 101.DEF, 101.LAB and 101.PRE)	

(*) This certification is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended.

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.

TENABLE HOLDINGS, INC.

Date:	May 3, 2023	By:	/s/ Amit Yoran
			Amit Yoran
			Chairman and Chief Executive Officer
			(On Behalf of the Registrant and as Principal Executive Officer)
Date:	May 3, 2023	By:	/s/ Stephen A. Vintz
			Stephen A. Vintz
			Chief Financial Officer
			(Principal Financial Officer and Principal Accounting Officer)

Exhibit 31.1

CERTIFICATION OF PRINCIPAL 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

I, Amit Yoran, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Tenable Holdings, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: May 3, 2023

By: /s/ Amit Yoran
Amit Yoran
Chairman and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL 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

I, Stephen A. Vintz, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Tenable Holdings, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 3, 2023

By: /s/ Stephen A. Vintz
Stephen A. Vintz
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Exhibit 32.1

CERTIFICATIONS OF PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Each of the undersigned hereby certifies, pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Tenable Holdings, Inc. for the fiscal quarter ended March 31, 2023 fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Tenable Holdings, Inc.

Date:	May 3, 2023	By:	/s/ Amit Yoran
			Amit Yoran Chairman and Chief Executive Officer *(Principal Executive Officer)*
Date:	May 3, 2023	By:	/s/ Stephen A. Vintz
			Stephen A. Vintz Chief Financial Officer *(Principal Financial Officer and Principal Accounting Officer)*