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

FORM 10-Q/A
(Amendment No. 1)

☒ **Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the Quarterly Period Ended September 30, 2022

or

☐ **Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from _____ to _____

Commission file number 001-38600

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 October 26, 2022 was 112,514,101.

EXPLANATORY NOTE

The purpose of this amendment (Amendment) to our Form 10-Q for the quarter ended September 30, 2022 (Form 10-Q) as filed with the Securities and Exchange Commission (SEC) on October 31, 2022 is solely to correct the number of new enterprise platform customers added in the three months ended September 30, 2022 and the corresponding percentage change year-over-year, which were reported incorrectly due to a clerical error. The amended number of new enterprise platform customers is 508 compared to 712 previously reported. The amended disclosure can be found under the Customer Metrics heading in the Key Operating and Financial Metrics section of Item 2 on page 6 below. The remainder of our Form 10-Q, including Item 2 below, is unchanged. Our financial results for the three and nine months ended September 30, 2022 and our financial outlook for three months and year ending December 31, 2022 were not impacted by this Amendment.

This Amendment is as of the original filing date of our Form 10-Q, October 31, 2022. The Amendment does not reflect events or transactions that may have occurred after the original filing date or modify or update any disclosures in our Form 10-Q that may have been affected by subsequent events or transactions. Accordingly, this Amendment should be read in conjunction with our Form 10-Q and our other filings with the SEC.

PART I. FINANCIAL INFORMATION

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, 2021, or the 10-K, filed with the Securities and Exchange Commission on February 25, 2022. 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 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 a discipline for managing, measuring and comparing cybersecurity risk in the digital era.

We have continued to expand and diversify our platform offerings from traditional vulnerability management (VM) solutions, which include Tenable.sc and Nessus, to our cloud exposure solutions, which include Tenable.ep, Tenable.io, Tenable.cs, Tenable Web Scanning, or Tenable.io WAS, Tenable.ad and Tenable.ot. In October 2022, we released Tenable One, an evolution of Tenable.ep, as our Exposure Management Platform that provides unified data, analytics and visibility into exposures, identifies attack paths and enables more efficient risk management.

Our platform offerings 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, DevOps environments, Active Directory and Identity environments, and Industrial IoT and OT environments. We also provide deep analytics to help organizations score, trend and compare their cyber exposure over time, and communicate cyber risk in business terms to make better strategic decisions. Our platform offerings integrate and analyze data from our native collectors alongside IT asset, vulnerability and threat data from third-party systems and applications to prioritize security issues for remediation and focus an organization's resources based on risk and business criticality.

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.

Many of our enterprise platform customers initially use either our free or paid version of Nessus, one of the most widely deployed vulnerability assessment solutions in the cybersecurity industry. Nessus, which is sold on a stand-alone basis and is the technology that underpins our enterprise platform offerings, is designed to quickly and accurately identify security vulnerabilities, configuration issues and malware. Our free version of Nessus, Nessus Essentials, allows for vulnerability assessment over a limited number of IP addresses. We believe many of our Nessus customers begin with Nessus Essentials and subsequently upgrade to Nessus Professional, the paid version of Nessus; however, we expect a significant number of users to continue to use Nessus Essentials.

Revenue in the three months ended September 30, 2022 and 2021 and the nine months ended September 30, 2022 and 2021 was $174.9 million, $138.7 million, $498.6 million and $392.1 million, respectively, representing year-over-year growth of 26% and 27% in the quarterly and year-to-date periods, respectively. 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 and nine months ended September 30, 2022 and 95% and 94% of revenue in the three and nine months ended September 30, 2021, respectively. Our net loss in the three months ended September 30, 2022 and 2021 and the nine months ended September 30, 2022 and 2021 was $18.7 million, $16.2 million, $70.7 million and $35.6 million, respectively, as we continue to invest in our business and market opportunity. Our cash flows from operating activities was $35.9 million, $19.6 million, $99.2 million and $74.8 million in the three months ended September 30, 2022 and 2021 and the nine months ended September 30, 2022 and 2021, respectively.

Recent Events

Substantially all of our sales contracts are denominated in U.S. dollars, and during the year, the U.S. dollar strengthened compared to other currencies. Continued strength or further strengthening of the U.S. dollar compared to other currencies could result in lower international sales as our products would seem more expensive. Additionally, continued strength or further strengthening of the U.S. dollar compared to other currencies could result in lower international operating costs as the U.S. dollar is the functional currency for all of our international subsidiaries.

Other factors, including the COVID-19 pandemic, inflation and the Russian invasion of Ukraine have not had a significant adverse impact on our business as of September 30, 2022. We continue to monitor the impact of these matters on our business, our customers, partners, employees and service providers.

Financial Highlights

Below are our key financial results:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands, except per share data)	**2022**	**2021**	**2022**	**2021**
Revenue	$ 174,851	$ 138,664	$ 498,560	$ 392,112
Loss from operations	(12,958)	(11,218)	(53,726)	(28,901)
Net loss	(18,730)	(16,246)	(70,735)	(35,632)
Net loss per share, basic and diluted	(0.17)	(0.15)	(0.64)	(0.34)
Net cash provided by operating activities	35,853	19,633	99,233	74,793
Purchases of property and equipment	(4,347)	(1,174)	(13,910)	(3,769)

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 September 30,		Nine Months Ended September 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Revenue	$ 174,851	$ 138,664	$ 498,560	$ 392,112
Add: Deferred revenue (current), end of period	447,863	362,308	447,863	362,308
Less: Deferred revenue (current), beginning of period[1]	(415,378)	(334,106)	(408,443)	(331,275)
Calculated current billings	$ 207,336	$ 166,866	$ 537,980	$ 423,145

(1) Deferred revenue (current), beginning of period for the nine months ended September 30, 2022 and 2021 includes $0.9 million and $2.5 million, respectively, 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, which includes capitalized internal use software. We believe free cash flow is an important liquidity measure of the cash (if any) that is available, after purchases of property and equipment, 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 them 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:

(in thousands)	Three Months Ended September 30, 2022	Three Months Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Net cash provided by operating activities	$ 35,853	$ 19,633	$ 99,233	$ 74,793
Purchases of property and equipment	(4,347)	(1,174)	(13,910)	(3,769)
Free cash flow[(1)]	$ 31,506	$ 18,459	$ 85,323	$ 71,024

(1) Free cash flow for each of the periods presented was impacted by:

(in thousands)	Three Months Ended September 30, 2022	Three Months Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Employee stock purchase plan activity	$ (4,845)	$ (2,795)	$ (4,538)	$ (4,674)
Acquisition-related expenses	(398)	(314)	(2,395)	(3,591)
Costs related to intra-entity asset transfers	—	—	(838)	—
Tax payment on intra-entity asset transfers	—	—	(2,697)	(2,808)
Capital expenditures related to new headquarters	—	(80)	—	(928)

In addition, free cash flow for the three months ended September 30, 2022 and 2021 and the nine months ended September 30, 2022 and 2021 were benefited by approximately $0 million, $1 million, $8 million and $11 million, respectively, as a result of the accelerated timing of payments for insurance, professional fees 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 September 30, 2022	Three Months Ended September 30, 2021	Change (%)
Number of new enterprise platform customers added in period[(1)]	508	499	2%

(1) We define an enterprise platform customer as a customer that has licensed Tenable.ep, 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 Professional to enterprise platforms.

	At September 30, 2022	At September 30, 2021	Change (%)
Number of customers with $100,000 and greater in annual contract value at end of period	1,280	995	29%

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. We generally expect the dollar-based net expansion rate to range from 110% to 120%.

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:

	September 30,	
(in thousands)	**2022**	**2021**
Dollar-based net expansion rate	118 %	113 %

We also utilize an alternative dollar-based net expansion rate to assess our ability to expand sales with existing customers and evaluate the performance of our sales team. This alternative dollar-based net expansion rate is based on the methodology described above, but excludes the annual contract value of prior period multi-year sales from ARR in the numerator and the denominator of the calculation. The multi-year sales excluded from ARR has generally been approximately 13% of the total ARR. This methodology measures net expansion by customers with contracts up for renewal during the period. Applying this methodology would have increased the dollar-based net expansion rate by two percentage points at September 30, 2022 and 2021.

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 September 30,		Nine Months Ended September 30,	
(dollars in thousands)	2022	2021	2022	2021
Loss from operations	$ (12,958)	$ (11,218)	$ (53,726)	$ (28,901)
Stock-based compensation	32,643	20,912	89,954	58,333
Acquisition-related expenses	322	2,270	2,376	5,970
Costs related to intra-entity asset transfers(1)	—	—	838	—
Amortization of acquired intangible assets	3,080	1,721	8,292	3,704
Non-GAAP income from operations	$ 23,087	$ 13,685	$ 47,734	$ 39,106
Operating margin	(7)%	(8)%	(11)%	(7)%
Non-GAAP operating margin	13 %	10 %	10 %	10 %

(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 September 30,		Nine Months Ended September 30,	
(in thousands, except for per share amounts)	**2022**	**2021**	**2022**	**2021**
Net loss	$ (18,730)	$ (16,246)	$ (70,735)	$ (35,632)
Stock-based compensation	32,643	20,912	89,954	58,333
Tax impact of stock-based compensation[1]	318	(15)	1,572	(499)
Acquisition-related expenses[2]	322	2,270	2,376	5,970
Costs related to intra-entity asset transfers[3]	—	—	838	—
Amortization of acquired intangible assets[4]	3,080	1,721	8,292	3,704
Tax impact of acquisitions[5]	(958)	(546)	(4,307)	(1,683)
Tax impact of intra-entity asset transfers[6]	508	—	2,121	2,808
Non-GAAP net income	$ 17,183	$ 8,096	$ 30,111	$ 33,001
Net loss per share, diluted	$ (0.17)	$ (0.15)	$ (0.64)	$ (0.34)
Stock-based compensation	0.29	0.20	0.81	0.55
Tax impact of stock-based compensation[1]	—	—	0.01	—
Acquisition-related expenses[2]	—	0.02	0.02	0.06
Costs related to intra-entity asset transfers[3]	—	—	0.01	—
Amortization of acquired intangible assets[4]	0.03	0.02	0.08	0.04
Tax impact of acquisitions[5]	(0.01)	(0.01)	(0.04)	(0.02)
Tax impact of intra-entity asset transfers[6]	0.01	—	0.02	0.02
Adjustment to diluted earnings per share[7]	—	(0.01)	(0.01)	(0.02)
Non-GAAP earnings per share, diluted	$ 0.15	$ 0.07	$ 0.26	$ 0.29
Weighted-average shares used to compute GAAP net loss per share, diluted	111,937	106,869	110,843	105,765
Weighted-average shares used to compute non-GAAP earnings per share, diluted	117,334	114,983	117,524	114,271

(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. Additionally, the tax impact of acquisitions for the nine months ended September 30, 2022 includes a reversal of the $2.5 million income tax benefit recognized for GAAP purposes related to the partial release of our valuation allowance associated with the Bit Discovery acquisition.

(6) The tax impact of the intra-entity asset transfers are related to current tax expense based on the applicable Israeli tax rates resulting from our internal restructuring of Cymptom in the three and nine months ended September 30, 2022 and Indegy in the nine months ended September 30, 2021.

(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.

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 to decrease over time, as we expect revenue from our cloud-based subscriptions to increase as a percentage of revenue. However, our gross margin could fluctuate from period to period depending on the interplay of all of these factors, particularly as it relates to cloud infrastructure costs.

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 certain 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:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Revenue	$ 174,851	$ 138,664	$ 498,560	$ 392,112
Cost of revenue(1)	38,582	27,062	109,549	75,560
Gross profit	136,269	111,602	389,011	316,552
Operating expenses:				
Sales and marketing(1)	88,123	68,360	258,119	192,673
Research and development(1)	36,131	30,675	106,649	85,714
General and administrative(1)	24,973	23,785	77,969	67,066
Total operating expenses	149,227	122,820	442,737	345,453
Loss from operations	(12,958)	(11,218)	(53,726)	(28,901)
Interest income	1,803	115	2,746	324
Interest expense	(5,082)	(3,594)	(12,246)	(3,873)
Other expense, net	(2,073)	(823)	(4,880)	(1,360)
Loss before income taxes	(18,310)	(15,520)	(68,106)	(33,810)
Provision for income taxes	420	726	2,629	1,822
Net loss	$ (18,730)	$ (16,246)	$ (70,735)	$ (35,632)

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Cost of revenue	$ 2,341	$ 1,197	$ 5,968	$ 3,336
Sales and marketing	13,589	7,629	36,420	21,502
Research and development	8,754	5,587	23,294	14,919
General and administrative	7,959	6,499	24,272	18,576
Total stock-based compensation expense	$ 32,643	$ 20,912	$ 89,954	$ 58,333

Comparison of the Three Months Ended September 30, 2022 and 2021

Revenue

The following table presents the increase in revenue:

(dollars in thousands)	Three Months Ended September 30, 2022	2021	Change ($)	(%)
Subscription revenue	$ 156,764	$ 122,156	$ 34,608	28 %
Perpetual license and maintenance revenue	12,658	12,749	(91)	(1)%
Professional services and other revenue	5,429	3,759	1,670	44 %
Revenue	$ 174,851	$ 138,664	$ 36,187	26 %

The increase in revenue of $36.2 million included $31.6 million from existing customers as of October 1, 2021 and $4.6 million from new customers. U.S. revenue increased $18.9 million, or 24%. International revenue increased $17.3 million, or 30%.

Cost of Revenue, Gross Profit and Gross Margin

(dollars in thousands)	Three Months Ended September 30, 2022	2021	Change ($)	(%)
Cost of revenue	$ 38,582	$ 27,062	$ 11,520	43 %
Gross profit	136,269	111,602	24,667	22 %
Gross margin	78 %	80 %		

The increase in cost of revenue of $11.5 million was primarily due to:

- a $4.6 million increase in third-party cloud infrastructure costs;
- a $4.4 million increase in personnel costs, including a $1.1 million increase in stock-based compensation;
- a $1.4 million increase in amortization of intangible assets due to acquired intangible assets;
- a $0.5 million increase in the cost of goods; and
- a $0.4 million increase in professional fees.

The amounts above are net of $0.2 million in savings due to the impact of foreign exchange rates.

Operating Expenses

Sales and Marketing

(dollars in thousands)	Three Months Ended September 30, 2022	2021	Change ($)	(%)
Sales and marketing	$ 88,123	$ 68,360	$ 19,763	29 %

The increase in sales and marketing expense of $19.8 million was primarily due to:

- a $13.4 million increase in personnel costs largely associated with an increase in headcount, including a $6.0 million increase in stock-based compensation;
- a $3.2 million increase in sales commissions due to increased sales and the amortization of deferred commissions;
- a $1.9 million increase in expenses for demand generation programs, including advertising, sponsorships and brand awareness efforts; and

- a $0.9 million increase in selling expenses, including travel and meeting costs and the cost of software subscriptions.

The amounts above are net of $1.3 million in savings due to the impact of foreign exchange rates.

Research and Development

	Three Months Ended September 30,		Change	
(dollars in thousands)	2022	2021	($)	(%)
Research and development	$ 36,131	$ 30,675	$ 5,456	18 %

The increase in research and development expense of $5.5 million was primarily due to:

- a $4.1 million increase in personnel costs, primarily due to an increase in headcount, including a $3.2 million increase in stock-based compensation;
- a $0.7 million increase in third-party cloud infrastructure costs; and
- a $0.4 million increase in software subscriptions.

The amounts above are net of $0.8 million in savings due to the impact of foreign exchange rates.

General and Administrative

	Three Months Ended September 30,		Change	
(dollars in thousands)	2022	2021	($)	(%)
General and administrative	$ 24,973	$ 23,785	$ 1,188	5 %

The increase in general and administrative expense of $1.2 million was primarily due to:

- a $2.3 million increase in personnel costs largely associated with an increase in headcount, including a $1.5 million increase in stock-based compensation;
- a $0.3 million increase in professional fees; and
- a $0.3 million increase in travel and meeting costs; partially offset by
- a $1.9 million decrease in acquisition-related expenses.

The amounts above are net of $0.2 million in savings due to the impact of foreign exchange rates.

Interest Income, Interest Expense and Other Expense, Net

	Three Months Ended September 30,		Change	
(dollars in thousands)	2022	2021	($)	(%)
Interest income	$ 1,803	$ 115	$ 1,688	1,468 %
Interest expense	(5,082)	(3,594)	(1,488)	41 %
Other expense, net	(2,073)	(823)	(1,250)	152 %

The $1.7 million increase in interest income was due to a higher interest rate on an increased amount of cash and cash equivalents and short-term investments. The $1.5 million increase in interest expense was primarily related to an increase in the variable rate of our Term Loan. The $1.3 million increase in other expense, net was due to an increase in foreign exchange losses.

Provision for Income Taxes

(dollars in thousands)	Three Months Ended September 30, 2022	2021	Change ($)	(%)
Provision for income taxes	$ 420	$ 726	$ (306)	(42)%

In the three months ended September 30, 2022, the provision for income taxes included:

- $0.5 million of current expense from the restructuring of our research and development operations in Israel;
- $0.2 million of income taxes in foreign jurisdictions in which we conduct business; and
- $0.7 million of discrete items primarily related to withholding taxes on sales to customers; partially offset by
- $1.0 million of deferred tax benefits related to the Alsid acquisition.

In the three months ended September 30, 2021, the provision for income taxes included:

- $0.8 million of income taxes in foreign jurisdictions in which we conduct business; and
- $0.7 million of discrete expenses primarily related to withholding taxes on sales to customers; partially offset by
- $0.6 million of deferred tax benefits related to the Alsid acquisition; and
- $0.2 million of discrete benefits.

Comparison of the Nine Months Ended September 30, 2022 and 2021

Revenue

The following table presents the increase in revenue:

(dollars in thousands)	Nine Months Ended September 30, 2022	2021	Change ($)	(%)
Subscription revenue	$ 446,257	$ 343,725	$ 102,532	30 %
Perpetual license and maintenance revenue	38,214	37,721	493	1 %
Professional services and other revenue	14,089	10,666	3,423	32 %
Revenue	$ 498,560	$ 392,112	$ 106,448	27 %

The increase in revenue of $106.4 million included $94.7 million from existing customers as of October 1, 2021 and $11.7 million from new customers. U.S. revenue increased $52.1 million, or 23%. International revenue increased $54.3 million, or 33%.

Cost of Revenue, Gross Profit and Gross Margin

(dollars in thousands)	Nine Months Ended September 30, 2022	2021	Change ($)	(%)
Cost of revenue	$ 109,549	$ 75,560	$ 33,989	45 %
Gross profit	389,011	316,552	72,459	23 %
Gross margin	78 %	81 %		

The increase in cost of revenue of $34.0 million was primarily due to:

- a $16.3 million increase in third-party cloud infrastructure costs;
- a $9.1 million increase in personnel costs primarily due to increased headcount and support for cloud-based products, including a $2.4 million increase in stock-based compensation;
- a $4.6 million increase in amortization of intangible assets due to acquired intangible assets;

- a $1.9 million increase in professional fees;
- a $0.9 million increase in the cost of goods;
- a $0.5 million increase in software subscriptions; and
- a $0.4 million increase in allocated overhead.

The amounts above are net of $0.5 million in savings due to the impact of foreign exchange rates.

Operating Expenses

Sales and Marketing

	Nine Months Ended September 30,		Change	
(dollars in thousands)	**2022**	**2021**	**($)**	**(%)**
Sales and marketing	$ 258,119	$ 192,673	$ 65,446	34 %

The increase in sales and marketing expense of $65.4 million was primarily due to:

- a $41.8 million increase in personnel costs, largely associated with an increase in headcount and a $14.9 million increase in stock-based compensation;
- an $11.8 million increase in sales commissions, including sales commission draws, due to increased sales and the amortization of deferred commissions;
- a $6.0 million increase in expenses for demand generation programs, including advertising, sponsorships and brand awareness efforts;
- a $4.6 million increase in selling expenses, including travel and meeting costs and the cost of software subscriptions; and
- a $1.3 million increase in allocated overhead.

The amounts above are net of $2.7 million in savings due to the impact of foreign exchange rates.

Research and Development

	Nine Months Ended September 30,		Change	
(dollars in thousands)	**2022**	**2021**	**($)**	**(%)**
Research and development	$ 106,649	$ 85,714	$ 20,935	24 %

The increase in research and development expense of $20.9 million was primarily due to:

- a $16.2 million increase in personnel costs, largely associated with an increase in headcount and a $8.4 million increase in stock-based compensation;
- a $1.7 million increase in third-party cloud infrastructure costs;
- a $1.6 million increase in software subscription costs; and
- a $0.9 million increase in allocated overhead.

The amounts above are net of $1.6 million in savings due to the impact of foreign exchange rates.

General and Administrative

(dollars in thousands)	Nine Months Ended September 30, 2022	2021	Change ($)	(%)
General and administrative	$ 77,969	$ 67,066	$ 10,903	16 %

The increase in general and administrative expense of $10.9 million was primarily due to:

- a $9.6 million increase in personnel costs, largely associated with an increase in headcount and a $5.7 million increase in stock-based compensation;
- a $1.5 million increase in professional fees;
- a $0.8 million increase in intra-entity asset transfer costs related to Cymptom;
- a $0.7 million increase software subscription costs; and
- a $0.6 million increase in value added and other taxes; partially offset by
- a $3.7 million decrease in acquisition-related expenses.

The amounts above are net of $0.5 million in savings due to the impact of foreign exchange rates.

Interest Income, Interest Expense and Other Expense, Net

(dollars in thousands)	Nine Months Ended September 30, 2022	2021	Change ($)	(%)
Interest income	$ 2,746	$ 324	$ 2,422	748 %
Interest expense	(12,246)	(3,873)	(8,373)	216 %
Other expense, net	4,880	1,360	3,520	259 %

The $2.4 million increase in interest income was due to a higher interest rate on an increased amount of cash and cash equivalents and short-term investments. Interest expense increased $8.4 million primarily due to expense related to our Term Loan entered into in July 2021. Other expense, net increased $3.5 million due to an increase in foreign exchange losses.

Provision for Income Taxes

(dollars in thousands)	Nine Months Ended September 30, 2022	2021	Change ($)	(%)
Provision for income taxes	$ 2,629	$ 1,822	$ 807	44 %

In the nine months ended September 30, 2022, the provision for income taxes included:

- $3.1 million of income taxes in foreign jurisdictions in which we conduct business;
- $2.1 million of current expense from the restructuring of our research and development operations in Israel; and
- $1.7 million of discrete items primarily related to withholding taxes on sales to customers; partially offset by
- a $2.5 million benefit from releasing a valuation allowance related to the Bit Discovery acquisition; and
- $1.8 million of deferred tax benefits related to the Alsid acquisition.

In the nine months ended September 30, 2021, the provision for income taxes included:

- $2.8 million of current expense from the restructuring of our research and development operations in Israel;
- $1.8 million income taxes in foreign jurisdictions in which we conduct business; and
- $1.7 million of discrete expenses primarily related to withholding taxes on sales to customers; partially offset by

- $2.8 million of discrete benefits, primarily related to a Supreme Court decision in India on the taxability of software license payments to nonresidents and the associated withholding taxes; and
- a $1.7 million deferred tax benefit related to the Alsid acquisition.

Liquidity and Capital Resources

At September 30, 2022, we had $288.2 million of cash and cash equivalents, which consisted of bank deposits and money market funds, and $259.8 million short-term investments, which consisted of commercial paper, asset backed securities, certificates of deposit, U.S. Treasury and agency obligations and corporate 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 $725.3 million at September 30, 2022.

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 September 30, 2022, we had deferred revenue of $593.7 million, of which $447.9 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, including the build-out of our new headquarters, and acquiring complementary businesses and technology. In 2022, we paid $23.0 million and $44.0 million in cash to acquire Cymptom and Bit Discovery, respectively. We expect to 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 nine months ended September 30, 2022, 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 interest at a rate of 2.75% per annum over LIBOR, subject to a 0.50% floor. The Term Loan interest rate from January 31, 2022 through July 2022 was 3.27%. Effective July 29, 2022 through October 30, 2022, the Term Loan has a variable interest rate of 5.56%. Effective October 31, 2022 through January 30, 2023, the Term loan has a variable interest rate of 7.16%. 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 September 30, 2022, 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 September 30, 2022, we were in compliance with the covenants and there were no amounts outstanding under the Revolving Credit Facility.

Cash Flows

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

	Nine Months Ended September 30,	
(in thousands)	**2022**	**2021**
Net cash provided by operating activities	$ 99,233	$ 74,793
Net cash used in investing activities	(108,003)	(205,013)
Net cash provided by financing activities	23,195	390,299
Effect of exchange rate changes on cash and cash equivalents and restricted cash	(4,276)	(2,418)
Net increase in cash and cash equivalents and restricted cash	$ 10,149	$ 257,661

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 used in investing activities decreased by $97.0 million, primarily due to a $75.7 million decrease in net purchases of short-term investments and a $31.5 million decrease in cash paid for acquisitions. This decrease was partially offset by a $10.1 million increase in purchases of property and equipment, primarily related to capitalized software.

Financing Activities

Net cash provided by financing activities decreased by $367.1 million, primarily due to $375.0 million of proceeds from our Credit Facility in 2021 and $2.8 million of principal payments made on our term loan. This decrease was partially offset by $9.3 million of issuance costs related to our Credit Facility in 2021.

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 September 30, 2022, 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.

PART II. OTHER INFORMATION

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 Fo 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 Fo S-1 (File No. 333-226002) on July 16, 20
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.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.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:	November 7, 2022	By:	/s/ Amit Yoran
			Amit Yoran
			Chairman and Chief Executive Officer
			(On Behalf of the Registrant and as Principal Executive Officer)
Date:	November 7, 2022	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)) 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) 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

   (c) 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: November 7, 2022

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)) 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) 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

   (c) 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: November 7, 2022

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 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 September 30, 2022 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 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:	November 7, 2022	By:	/s/ Amit Yoran
			Amit Yoran
			Chairman and Chief Executive Officer
			(Principal Executive Officer)
Date:	November 7, 2022	By:	/s/ Stephen A. Vintz
			Stephen A. Vintz
			Chief Financial Officer
			(Principal Financial Officer and Principal Accounting Officer)