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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2020

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 001-36067

FireEye, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**20-1548921**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

601 McCarthy Blvd.
Milpitas, CA 95035
(Address of principal executive offices) (Zip Code)

(408) 321-6300
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, $0.0001 par value per share	FEYE	The NASDAQ Global Select Market

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

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

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

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

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

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

The number of shares of the registrant's common stock outstanding as of July 28, 2020 was 225,521,258.

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PART I — FINANCIAL INFORMATION

Item1. Financial Statements

FIREEYE, INC.

Condensed Consolidated Balance Sheets

(In thousands, except per share data)

(Unaudited)

	June 30, 2020	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 404,346	$ 334,603
Short-term investments	509,858	704,955
Accounts receivable, net of allowance for doubtful accounts of $2,885 and $2,263 at June 30, 2020 and December 31, 2019, respectively	119,842	171,459
Inventories	5,440	5,892
Prepaid expenses and other current assets	94,654	96,827
Total current assets	1,134,140	1,313,736
Property and equipment, net	87,405	93,812
Operating lease right-of-use assets, net	54,572	58,758
Goodwill	1,213,454	1,205,292
Intangible assets, net	116,864	134,420
Deposits and other long-term assets	74,998	84,468
TOTAL ASSETS	$ 2,681,433	$ 2,890,486
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 10,733	$ 26,271
Operating lease liabilities, current	18,545	18,437
Accrued and other current liabilities	19,726	24,496
Accrued compensation	71,423	59,513
Convertible senior notes, current, net	—	117,288
Deferred revenue, current	563,190	603,944
Total current liabilities	683,617	849,949
Convertible senior notes, non-current, net	938,536	893,273
Deferred revenue, non-current	329,656	370,623
Operating lease liabilities, non-current	64,611	70,481
Other long-term liabilities	4,654	4,494
Total liabilities	2,021,074	2,188,820
Commitments and contingencies (NOTE 10)		
Stockholders' equity:		
Common stock, par value of $0.0001 per share; 1,000,000 shares authorized, 225,375 shares and 219,422 shares issued and outstanding as of June 30, 2020 and December 31, 2019, respectively	22	22
Additional paid-in capital	3,470,503	3,457,359
Treasury stock, at cost; 1,778 shares and 3,333 shares as of June 30, 2020 and December 31, 2019, respectively	(80,000)	(150,000)
Accumulated other comprehensive income	6,311	1,180
Accumulated deficit	(2,736,477)	(2,606,895)
Total stockholders' equity	660,359	701,666
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 2,681,433	$ 2,890,486

See accompanying notes to condensed consolidated financial statements.

FIREEYE, INC.

Condensed Consolidated Statements of Operations

(In thousands, except per share data)

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Revenue:				
Product, subscription and support	$ 177,305	$ 174,102	$ 351,388	$ 344,005
Professional services	52,595	43,506	103,234	84,147
Total revenue	229,900	217,608	454,622	428,152
Cost of revenue:				
Product, subscription and support	54,026	53,198	107,162	101,666
Professional services	26,967	24,195	55,417	47,295
Total cost of revenue	80,993	77,393	162,579	148,961
Total gross profit	148,907	140,215	292,043	279,191
Operating expenses:				
Research and development	60,596	67,538	128,099	134,933
Sales and marketing	90,042	101,494	190,242	205,390
General and administrative	25,281	27,926	52,710	55,302
Restructuring charges	12,558	—	23,532	3,799
Total operating expenses	188,477	196,958	394,583	399,424
Operating loss	(39,570)	(56,743)	(102,540)	(120,233)
Interest income	2,863	6,137	7,287	11,985
Interest expense	(15,356)	(15,407)	(31,202)	(30,670)
Other expense, net	(119)	(770)	(1,108)	(1,058)
Loss before income taxes	(52,182)	(66,783)	(127,563)	(139,976)
Provision for income taxes	1,094	540	2,019	2,722
Net loss	$ (53,276)	$ (67,323)	$ (129,582)	$ (142,698)
Net loss per share, basic and diluted	$ (0.24)	$ (0.33)	$ (0.59)	$ (0.71)
Weighted average shares used in computing net loss per share, basic and diluted	221,352	204,109	219,570	201,001

See accompanying notes to condensed consolidated financial statements.

FIREEYE, INC.

Condensed Consolidated Statements of Comprehensive Loss

(In thousands)

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Net loss	$ (53,276)	$ (67,323)	$ (129,582)	$ (142,698)
Change in net unrealized gain on available-for-sale investments, net of tax	7,980	1,172	5,131	3,269
Comprehensive loss	$ (45,296)	$ (66,151)	$ (124,451)	$ (139,429)

See accompanying notes to condensed consolidated financial statements.

FIREEYE, INC.

Condensed Consolidated Statements of Stockholders' Equity

(Unaudited, in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Total stockholders' equity, beginning balances	$ 653,608	$ 619,441	$ 701,666	$ 650,394
Common stock and additional paid-in-capital:				
Balance, beginning of period	3,488,478	3,194,504	3,457,381	3,152,179
Issuance of common stock for equity awards, net of tax withholdings	2,383	651	3,731	1,494
Shares withheld for taxes	(640)	—	(8,039)	—
Issuance of common stock related to employee stock purchase plan	12,300	12,315	12,300	12,315
Shares retired	(70,000)	—	(70,000)	—
Issuance of common stock and assumption of options related to Verodin, Inc. acquisition	—	121,158		121,158
Stock-based compensation	38,004	41,356	75,152	82,838
Balance, end of period	3,470,525	3,369,984	3,470,525	3,369,984
Treasury stock:				
Balance, beginning of period	(150,000)	(150,000)	(150,000)	(150,000)
Shares retired	70,000	—	70,000	—
Balance, end of period	(80,000)	(150,000)	(80,000)	(150,000)
Accumulated other comprehensive income (loss):				
Balance, beginning of period	(1,669)	(202)	1,180	(2,299)
Unrealized gain investments, net of tax	7,980	1,172	5,131	3,269
Balance, end of period	6,311	970	6,311	970
Accumulated deficit:				
Balance, beginning of period	(2,683,201)	(2,424,861)	(2,606,895)	(2,349,486)
Net loss	(53,276)	(67,323)	(129,582)	(142,698)
Balance, end of period	(2,736,477)	(2,492,184)	(2,736,477)	(2,492,184)
Total stockholders' equity, ending balances	$ 660,359	$ 728,770	$ 660,359	$ 728,770

See accompanying notes to condensed consolidated financial statements

FIREEYE, INC.

Condensed Consolidated Statements of Cash Flows

(In thousands)

(Unaudited)

	Six Months Ended June 30,	
	2020	**2019**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (129,582)	$ (142,698)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	47,738	48,102
Stock-based compensation	73,224	80,474
Non-cash interest expense related to convertible senior notes	24,367	23,700
Deferred income taxes	154	(18)
Other	6,608	637
Changes in operating assets and liabilities, net of business acquisitions:		
Accounts receivable	50,320	32,860
Inventories	(15)	(243)
Prepaid expenses and other assets	13,137	3,959
Accounts payable	(12,971)	4,415
Accrued liabilities	(6,073)	(3,566)
Accrued compensation	11,910	(8,704)
Deferred revenue	(81,721)	(24,830)
Other long-term liabilities	(6,862)	(4,564)
Net cash provided by provided by (used in) operating activities	(9,766)	9,524
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment and demonstration units	(17,556)	(28,240)
Purchases of short-term investments	(106,631)	(258,104)
Proceeds from maturities of short-term investments	277,749	311,905
Purchase of investment in privately held company	(1,000)	—
Proceeds from sales of short-term investments	28,208	—
Business acquisitions, net of cash acquired	(12,948)	(127,249)
Lease deposits	87	426
Net cash provided by (used in) investing activities	167,909	(101,262)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Repurchase of convertible senior notes	(96,392)	—
Payment related to shares withheld for taxes	(8,039)	—
Proceeds from employee stock purchase plan	12,300	12,315
Proceeds from exercise of equity awards	3,731	1,495
Net cash provided by provided by (used in) financing activities	(88,400)	13,810
Net change in cash and cash equivalents	69,743	(77,928)
Cash and cash equivalents, beginning of period	334,603	409,829
Cash and cash equivalents, end of period	$ 404,346	$ 331,901

FIREEYE, INC.

Condensed Consolidated Statements of Cash Flows

(In thousands)

(Unaudited)

	Six Months Ended June 30,	
	2020	**2019**
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid for income taxes	$ 1,449	$ 2,682
Cash paid for interest	$ 6,962	$ 6,962
SUPPLEMENTAL DISCLOSURES OF NON-CASH INVESTING AND FINANCING ACTIVITIES:		
Common stock issued in connection with acquisitions	$ —	$ 119,682
Purchases of property and equipment and demonstration units in accounts payable and accrued liabilities	$ 2,348	$ 6,531

See accompanying notes to condensed consolidated financial statements.

FIREEYE, INC.

Notes to Condensed Consolidated Financial Statements

1. Description of Business and Summary of Significant Accounting Policies

Description of Business

FireEye, Inc., with principal executive offices located in Milpitas, California, was incorporated as NetForts, Inc. on February 18, 2004, under the laws of the State of Delaware, and changed its name to FireEye, Inc. on September 7, 2005.

FireEye, Inc. and its wholly owned subsidiaries (collectively, the “Company”, “we”, “us” or “our”) provide comprehensive intelligence-based cybersecurity solutions that allow organizations to prepare for, prevent, investigate, respond to and remediate cyber attacks, including attacks that target on-premise, cloud and critical infrastructure environments. Our portfolio of cyber security products and services helps customers minimize the risk of costly cyber security breaches by:

- validating the effectiveness of existing cybersecurity controls before an attack occurs,
- detecting and preventing advanced, targeted and other evasive attacks missed by other security controls,
- enabling more efficient management of security operations, including alert management, investigations and response when a breach occurs, and
- providing assessment, training and other strategic security consulting services that help organizations improve their resilience to attack.

Our portfolio of cybersecurity solutions includes threat detection and prevention products that include appliance-based, virtual and cloud solutions for web security, email security and endpoint security. These products are complemented by our cloud-based threat intelligence, security analytics and security automation and orchestration technologies, as well as our managed security services, cybersecurity consulting and incident response offerings. In combination, our solutions and services enable a proactive approach to cybersecurity that extends across the threat management lifecycle to minimize the risk of costly cybersecurity breaches.

We have organized our cybersecurity solutions in a hub and spokes model designed to integrate machine-generated threat data from our detection and prevention products with our analytics, response and orchestration technologies delivered through our Helix cybersecurity operations platform. Helix is designed to enable more efficient security operations by correlating security and event data across an organization’s environment to determine which threats present the greatest risk, automate repetitive security processes, and provide tools and workflows to investigate and respond to attacks. The Helix cloud-based interface presents a unified view of an organization’s attack surface, including on-premise and cloud environments, and provides the contextual threat intelligence and threat management tools to enable a rapid response.

The majority of our products, subscriptions and services are sold to end-customers through distributors, resellers, and strategic partners, with a lesser percentage of sales directly to our end-customers.

On January 17, 2020, we acquired Cloudvisory LLC ("Cloudvisory"), a provider of cloud visibility and control solutions. Total consideration for the acquisition was $13.2 million in cash. We also assumed $0.3 million in net tangible liabilities.

In May 2019, we acquired Verodin, Inc. ("Verodin"), a security instrumentation platform company. As consideration for the acquisition, we paid $143.7 million in cash, issued 8,404,609 shares of our common stock with an estimated fair value of $119.7 million and recognized $1.5 million of the fair value of assumed stock options attributable to pre-combination services.

Basis of Presentation and Consolidation

The accompanying unaudited condensed consolidated financial statements include the accounts of FireEye, Inc. and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”), and following the requirements of the Securities and Exchange Commission (“SEC”), for interim reporting. As permitted under those rules, certain footnotes or other financial information that are normally required by U.S. GAAP can be condensed or omitted. These unaudited condensed consolidated financial statements have been prepared on the same basis as our annual consolidated financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, that are necessary for a fair statement of our financial information. The results of operations for the three and six months ended June 30, 2020 are not necessarily indicative of the results to be expected for the year ending December 31, 2020 or for any other interim period or for any other future year. The balance sheet as of December 31, 2019 has been derived from audited consolidated financial statements at that date but does not include all information required by U.S. GAAP for annual consolidated financial statements.

The accompanying unaudited condensed consolidated financial statements and related financial information should be read in conjunction with the audited consolidated financial statements and the related notes thereto for the year ended December 31, 2019 included in our Annual Report on Form 10-K for the year ended December 31, 2019.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Such management estimates include, but are not limited to, determining the nature and timing of satisfaction of performance obligations, useful life of our security appliances that are dependent on intelligence and assessing the material rights associated with it, determining the standalone selling price of performance obligations, subscriptions and services, commissions expense including the period of benefit of customer acquisition cost, bonus expense, future taxable income, contract manufacturer liabilities, litigation and settlement costs and other loss contingencies, fair value of our equity awards, achievement of targets for performance stock units, fair value of the liability and equity components of the Convertible Senior Notes (as defined in Note 9) and the purchase price allocation of acquired businesses. We base our estimates on historical experience and on assumptions that we believe are reasonable. Changes in facts or circumstances may cause us to change our assumptions and estimates in future periods, and it is possible that actual results could differ from current or revised future estimates.

Summary of Significant Accounting Policies

There have been no significant changes to our significant accounting policies as of and for the three and six months ended June 30, 2020, as compared to the significant accounting policies described in our Annual Report on Form 10-K for the year ended December 31, 2019.

Recently Adopted Accounting Pronouncements

Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract

In August 2018, the FASB issued ASU 2018-15, Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract. This standard requires capitalization of the implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. Further, the standard also requires the Company to expense the capitalized implementation costs of a hosting arrangement over the term of the hosting arrangement. We adopted the standard effective January 1, 2020. The standard did not have a significant impact on our condensed consolidated financial statements.

Simplifying the Test for Goodwill Impairment

In January 2017, the FASB issued ASU 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. This standard eliminates the requirement to calculate the implied fair value of goodwill to measure a goodwill impairment charge (i.e. Step 2 of the current guidance), instead measuring the impairment charge as the excess of the reporting unit's carrying amount over its fair value (i.e. Step 1 of the current guidance). The guidance was effective for the Company beginning in the first quarter of 2020, and will be applied prospectively. We adopted the standard effective January 1, 2020. The standard did not have a significant impact on our condensed consolidated financial statements.

Measurement of Credit Losses on Financial Instruments

In June 2016, the FASB issued ASU 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. This standard changes the impairment model for most financial assets and certain other instruments by introducing a current expected credit loss ("CECL") model. The CECL model is a more forward-looking approach based on expected losses rather than incurred losses, requiring entities to estimate and record losses expected over the remaining contractual life of an asset. The guidance was effective for the Company beginning in the first quarter of 2020. We adopted the standard effective January 1, 2020. The standard did not have a significant impact on our condensed consolidated financial statements.

Simplifying Accounting for Income Taxes

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes. This standard simplifies the accounting for income taxes by eliminating certain exceptions to the guidance in Topic 740 related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The new guidance also simplifies aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill and allocating consolidated income taxes to separate financial statements of entities not subject to income tax. ASU 2019-12 is effective for annual and interim periods in fiscal years beginning after December 15, 2020. Early adoption is permitted, and we adopted ASU 2019-12 as of January 1, 2020. The adoption did not have a significant impact on our consolidated financial statements.

Recent Legislation

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security (CARES) Act was enacted and signed into U.S. law to provide economic relief to individuals and businesses facing economic hardship as a result of the COVID-19 pandemic. Changes in tax laws or rates are accounted for in the period of enactment. The income tax provisions of the CARES Act do not have a significant impact on our current taxes, deferred taxes, or uncertain tax positions.

2. Fair Value Measurements

The accounting guidance for fair value measurements provides a framework for measuring fair value on either a recurring or nonrecurring basis, whereby the inputs used in our valuation techniques are assigned a hierarchical level. The following are the three levels of inputs to measure fair value:

- *Level 1:* Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.
- *Level 2:* Inputs that reflect quoted prices for identical assets or liabilities in less active markets; quoted prices for similar assets or liabilities in active markets; benchmark yields, reported trades, broker/dealer quotes, inputs other than quoted prices that are observable for the assets or liabilities; or inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- *Level 3:* Unobservable inputs that reflect our own assumptions incorporated in valuation techniques used to measure fair value. These assumptions are required to be consistent with market participant assumptions that are reasonably available.

We consider an active market to be one in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis, and consider an inactive market to be one in which there are infrequent or few transactions for the asset or liability, the prices are not current, or price quotations vary substantially either over time or among market makers. Where appropriate, our own or the counterparty's non-performance risk is considered in measuring the fair values of assets.

The following table presents our assets and liabilities measured at fair value on a recurring basis using the above input categories (in thousands):

	As of June 30, 2020				As of December 31, 2019			
Description	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets								
Cash equivalents:								
Money market funds	$ 96,874	$ —	$ —	$ 96,874	$ 24,246	$ —	$ —	$ 24,246
Total cash equivalents	96,874	—	—	96,874	24,246	—	—	24,246
Short-term investments:								
Certificates of deposit	—	3,997	—	3,997	—	5,145	—	5,145
Corporate notes and bonds	—	372,796	—	372,796	—	472,908	—	472,908
U.S. Treasuries	—	21,116	—	21,116	—	48,069	—	48,069
U.S. Government agencies	—	111,949	—	111,949	—	178,833	—	178,833
Total short-term investments	—	509,858	—	509,858	—	704,955	—	704,955
Total assets measured at fair value	$ 96,874	$ 509,858	$ —	$ 606,732	$ 24,246	$ 704,955	$ —	$ 729,201

Additionally, we have a restructuring liability related to certain real estate facilities that was calculated based on the present value of future non-lease payments, discounted at a rate commensurate with our current cost of financing as well as external ratings. This non-recurring fair value measurement is considered to be a Level 3 measurement due to the use of significant unobservable inputs. See Note 6 Restructuring Charges for a reconciliation of this liability.

We measure certain assets, including goodwill, intangible assets and our equity-method investment in a privately held company at fair value on a nonrecurring basis when there are identifiable events or changes in circumstances that may have a significant adverse impact on the fair value of these assets. In light of the COVID-19 pandemic, we performed an analysis of impairment indicators of these assets and noted no adverse impact to their fair values as of June 30, 2020.

The estimated fair value of the Convertible Senior Notes was determined to be $1 billion as of June 30, 2020 and $1.1 billion as of December 31, 2019. The fair value was determined based on the closing trading prices per $100 principal amount of the respective Convertible Senior Notes as of the last day of trading for the period. We consider the fair value of the Convertible Senior Notes to be a Level 2 measurement as they are not actively traded.

3. Investments

Our investments consisted of the following (in thousands):

	As of June 30, 2020			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Certificates of deposit	$ 3,899	$ 98	$ —	$ 3,997
Corporate notes and bonds	366,484	6,386	(74)	372,796
U.S. Treasuries	21,040	77	(1)	21,116
U.S. Government agencies	111,617	337	(5)	111,949
Total	$ 503,040	$ 6,898	$ (80)	$ 509,858

	As of December 31, 2019			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Certificates of deposit	$ 5,118	$ 27	$ —	$ 5,145
Corporate notes and bonds	471,172	1,950	(214)	472,908
U.S. Treasuries	48,086	2	(19)	48,069
U.S. Government agencies	178,891	52	(110)	178,833
Total	$ 703,267	$ 2,031	$ (343)	$ 704,955

The following tables present the gross unrealized losses and related fair values of our investments that have been in a continuous unrealized loss position (in thousands):

	As of June 30, 2020					
	Less Than 12 Months		Greater Than 12 Months		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Certificates of deposit	$ —	$ —	$ —	$ —	$ —	$ —
Corporate notes and bonds	6,053	(24)	26,907	(50)	32,960	(74)
U.S. Treasuries	—	—	14,000	(1)	14,000	(1)
U.S. Government agencies	3,498	(2)	14,802	(3)	18,300	(5)
Total	$ 9,551	$ (26)	$ 55,709	$ (54)	$ 65,260	$ (80)

	As of December 31, 2019					
	Less Than 12 Months		Greater Than 12 Months		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Certificates of deposit	$ 244	$ —	$ —	$ —	$ 244	$ —
Corporate notes and bonds	117,271	(205)	24,514	(9)	141,785	(214)
U.S. Treasuries	5,041	(2)	33,996	(17)	39,037	(19)
U.S. Government agencies	91,221	(103)	25,997	(7)	117,218	(110)
Total	$ 213,777	$ (310)	$ 84,507	$ (33)	$ 298,284	$ (343)

Unrealized losses related to these investments are due to interest rate fluctuations as opposed to credit quality. In addition, we do not intend to sell, and it is not more likely than not that we would be required to sell, these investments before recovery of their cost basis.

The following table summarizes the contractual maturities of our investments as of June 30, 2020 (in thousands):

	Amortized Cost	Fair Value
Due within one year	$ 185,227	$ 186,748
Due within one to three years	317,813	323,110
Total	$ 503,040	$ 509,858

All available-for-sale securities have been classified as current, based on management's ability to use the funds in current operations.

As of June 30, 2020, we held an 11.0% ownership interest in a privately held company, which is accounted for under the equity method based on our ability to exercise significant influence over operating and financial policies of the privately held company. This investment is classified within deposits and other long-term assets on our condensed consolidated balance sheets. The carrying value of this investment was $0.3 million as of June 30, 2020 and zero as of December 31, 2019.

4. Property and Equipment

Property and equipment, net consisted of the following (in thousands):

	As of June 30, 2020	As of December 31, 2019
Computer equipment and software	$ 211,516	$ 203,242
Leasehold improvements	62,797	64,180
Furniture and fixtures	15,354	15,496
Machinery and equipment	465	465
Total property and equipment	290,132	283,383
Less: accumulated depreciation	(202,727)	(189,571)
Total property and equipment, net	$ 87,405	$ 93,812

Depreciation and amortization expense related to property, equipment and demonstration units during the three months ended June 30, 2020 and 2019 was $9.2 million and $9.4 million, respectively. Depreciation and amortization expense related to property, equipment and demonstration units during the six months ended June 30, 2020 and 2019 was $18.2 million and $18.5 million, respectively.

During the three months ended June 30, 2020 and 2019, we capitalized $5.2 million and $6.1 million, respectively, of software development costs primarily related to our platform and cloud subscription offerings. Amortization expense related to capitalized software development costs during the three months ended June 30, 2020 and 2019 were $4.7 million and $4.0 million, respectively.

During the six months ended June 30, 2020 and 2019, we capitalized $11.0 million and $11.6 million, respectively, of software development costs primarily related to our platform and cloud subscription offerings. Amortization expense related to capitalized software development costs during the six months ended June 30, 2020 and 2019 were $9.2 million and $7.5 million, respectively.

Refer to Note 6 Restructuring Charges regarding fixed assets write-offs.

5. Business Combinations

Acquisition of Cloudvisory

On January 17, 2020, we acquired Cloudvisory, a provider of cloud visibility and control solutions. As consideration for the acquisition, we paid $13.2 million in cash. In addition, we assumed $0.3 million in net tangible liabilities.

The acquisition of Cloudvisory was accounted for in accordance with the acquisition method of accounting for business combinations with FireEye as the accounting acquirer. Under the acquisition method of accounting, the total purchase consideration is allocated to the tangible and identifiable intangible assets acquired and liabilities assumed based on their estimated fair values. The total purchase price of $13.2 million was allocated using the information available to us. As a result, we may continue to adjust the preliminary purchase price allocation after obtaining more information regarding asset valuations, liabilities assumed, and revisions of preliminary estimates. The results of operations of Cloudvisory have been included in our consolidated statements of operations from the acquisition date, though revenue and net income from Cloudvisory were not material for the three and six months ended June 30, 2020. Transaction costs were immaterial and expensed as incurred. Pro forma financial information has not been presented for this acquisition as the impact to our consolidated financial statements was not material. Allocation of the preliminary purchase price is as follows (in thousands):

	Amount
Net tangible liabilities assumed	$ (288)
Intangible assets	5,650
Goodwill	7,846
Total preliminary purchase price allocation	$ 13,208

The preliminary purchase price exceeded the fair value of the net tangible liabilities and identifiable intangible assets acquired, resulting in the recognition of goodwill. Goodwill is primarily attributable to expected synergies in our subscription offerings and cross-selling opportunities. None of the goodwill is expected to be deductible for U.S. federal income tax purposes.

Intangible assets consist primarily of developed technology and trade name. Intangible assets attributable to developed technology include a combination of patented and unpatented technology, trade secrets, computer software and research processes that represent the foundation for the existing and planned new products to facilitate the generation of new content. Trade name is attributable to marketing goods and services under the Cloudvisory brand.

The estimated useful life and fair values of the identifiable intangible assets are as follows (in thousands):

	Preliminary Estimated Useful Life (in years)	Amount
Developed technology	3	$ 5,500
Trade name	1	150
Total identifiable intangible assets		$ 5,650

The value of developed technology was estimated using the excess earnings method, an income approach (Level 3), which converts projected revenues and costs into cash flows. To reflect the fact that certain other assets contribute to the cash flows generated, the returns for these contributory assets were removed to arrive at estimated cash flows solely attributable to the acquired technology, which were discounted at a rate of 35% to determine the fair value.

The value of the trade name was estimated using the relief-from-royalty method, an income approach (Level 3), which estimates the cost savings that accrue to the owner of the intangibles asset that would otherwise be payable as royalties or license fees on revenues earned through the use of the asset. A royalty rate was applied to the projected revenues associated with the intangible asset to determine the amount of savings, which was at a rate of 35% to determine the fair value.

Discount rates for each respective intangible asset were determined by accounting for the risk associated with each asset, including required technology development necessary to support respective projections, the uncertainty of market success and the risk inherent with projected financial results. The estimated useful lives were determined by evaluating the expected economic and useful lives of the assets and of similar intangible assets from previous business combinations and adjusting accordingly for circumstances that may be unique to Cloudvisory.

Acquisition of Verodin

On May 28, 2019, we acquired all outstanding shares of privately held Verodin, a security instrumentation platform company. We have incorporated the Verodin technology into our platform and analytics capabilities. In connection with this acquisition, we paid cash consideration of $143.7 million and issued 8,404,609 shares of our common stock with an estimated fair value of $119.7 million. We also assumed unvested stock options, which are now exercisable for our common stock, of which $1.5 million of the fair value has been accounted for as consideration for assumed awards pertaining to pre-combination service prior to acquisition. Based on the above, total purchase consideration for Verodin was $264.9 million.

The acquisition of Verodin was accounted for in accordance with the acquisition method of accounting for business combinations with FireEye as the accounting acquirer. We expensed the related acquisition costs of $0.6 million in general and administrative expenses. Under the acquisition method of accounting, the total purchase consideration is allocated to the tangible and identifiable intangible assets acquired and liabilities assumed based on their estimated fair values. The total purchase price of $264.9 million was allocated using information available to us. Pro forma financial information has not been presented for this acquisition as the impact to our consolidated financial statements was not material. Allocation of the purchase price is as follows (in thousands):

	Amount
Net tangible assets assumed	$ 15,036
Intangible assets	45,200
Deferred tax liability	(1,158)
Goodwill	205,804
Total purchase price allocation	$ 264,882

The purchase price exceeded the fair value of the net tangible assets and identifiable intangible assets acquired, resulting in the recognition of goodwill. Goodwill is primarily attributable to expected synergies in our subscription offerings and cross-selling opportunities. None of the goodwill is expected to be deductible for U.S. federal income tax purposes.

Intangible assets consist primarily of developed technology, customer relationships, trade name and contract backlog. Intangible assets attributable to developed technology include a combination of patented and unpatented technology, trade secrets, computer software and research processes that represent the foundation for the existing and planned new products to facilitate the generation of new content. Customer relationship intangibles relate to Verodin's ability to sell current and future content, as well as products built around this content, to its existing customers. Trade name is attributable to marketing goods and services under the Verodin brand. Contract backlog pertains to unbilled and unrecognized contracts yet to be fulfilled.

The estimated useful life and fair values of the identifiable intangible assets are as follows (dollars in thousands):

	Estimated Useful Life (in years)	Amount
Developed technology	5	$ 38,300
Customer relationships	5	4,600
Trade name	5	1,600
Contract backlog	2	700
Total identifiable intangible assets		$ 45,200

The value of developed technology was estimated using the excess earnings method, an income approach (Level 3), which converts projected revenues and costs into cash flows. To reflect the fact that certain other assets contribute to the cash flows generated, the returns for these contributory assets were removed to arrive at estimated cash flows solely attributable to the acquired technology, which were discounted at a rate of 12% to determine the fair value.

The value of customer relationships was estimated using the cost savings method, an income level approach (Level 3), which estimates the value of an asset based upon costs avoided through ownership of the asset. Estimated costs on projected revenues, excluding acquired contract backlog, were made using historical data pertaining to sales to new and existing customers. The cash flow impact of projected cost savings, primarily avoidance of legal costs pertaining to new customers and lower commission rates applicable to existing customers than new customers, were discounted at a rate of 11% to determine the fair value.

The value of the trade name was estimated using the relief-from-royalty method, an income approach (Level 3), which estimates the cost savings that accrue to the owner of the intangibles asset that would otherwise be payable as royalties or license fees on revenues earned through the use of the asset. A royalty rate was applied to the projected revenues associated with the intangible asset to determine the amount of savings, which was at a rate of 12% to determine the fair value.

The value of the contract backlog was estimated by discounting estimated cash flows from existing orders, an income level approach (Level 3). Using expected timing of backlog revenue realization by quarter, the cash flow estimates resulting therefrom were reduced by estimated fulfillment costs associated with completing the backlog obligations, and the net cash flows were then discounted at a rate of 8% to determine fair value.

Discount rates for each respective intangible asset were determined by accounting for the risk associated with each asset, including required technology development and customer acquisition required to support respective projections, the uncertainty of market success and the risk inherent with projected financial results. The estimated useful lives were determined by evaluating the expected economic and useful lives of the assets and of similar intangible assets from previous business combinations and adjusting accordingly after taking into account circumstances that may be unique to Verodin.

Goodwill and Purchased Intangible Assets

Goodwill increased by $8.2 million for the six months ended June 30, 2020. The increase was comprised of approximately $7.8 million due to the acquisition of Cloudvisory in January 2020 and $0.3 million due to a tax adjustment for the acquisition of Verodin in May 2019. There were no other changes to the carrying amount of goodwill.

Purchased intangible assets consisted of the following (in thousands):

	As of June 30, 2020	As of December 31, 2019
Developed technology	$ 153,803	$ 148,303
Content	158,700	158,700
Customer relationships	115,690	115,690
Contract backlog	13,200	13,200
Trade names	17,310	17,160
Non-competition agreements	1,400	1,400
Total intangible assets	460,103	454,453
Less: accumulated amortization	(343,239)	(320,033)
Total net intangible assets	$ 116,864	$ 134,420

Amortization expense of intangible assets during the three months ended June 30, 2020 and 2019 was $11.2 million and $13.0 million, respectively. Amortization expense of intangible assets during the six months ended June 30, 2020 and 2019 was $23.2 million and $25.1 million, respectively.

The expected future annual amortization expense of intangible assets as of June 30, 2020 is presented below (in thousands):

Years Ending December 31,	**Amount**
2020 (remaining six months)	$ 21,847
2021	40,220
2022	28,942
2023	22,082
2024	3,692
2025	81
Total	$ 116,864

6. Restructuring Charges

In January 2020, we implemented a restructuring plan designed primarily to align our resources and investments with the strategic growth initiatives of the business. This restructuring plan resulted in a reduction of less than 2% of our total workforce as of March 31, 2020 as well as the impairment of certain long lived assets.

In April 2020, we implemented another restructuring plan to streamline the Company's operations to more closely align expenses to the Company's projected revenue, position the Company for improved operating performance and allow the Company to increase investment in the growth areas of the business. This restructuring plan resulted in the reduction of 6% of the Company's workforce.

The total provision for restructuring charges during the six months ended June 30, 2020 of $23.5 million includes $17.4 million of cash charges which consists of $13.8 million in provision for restructuring charges and $3.6 million in other adjustments, which was offset by a $0.4 million reduction in severance benefits that were not utilized. In addition, there are non-cash charges of $6.1 million related to fixed asset and right-of-use asset write-offs and stock-based compensation.

The following table sets forth the restructuring balance as of June 30, 2020 related to previous restructuring activities and a summary of restructuring activities during the six months ended June 30, 2020 (in thousands):

	Severance and related costs	**Facilities costs**	**Total costs**
Balance, December 31, 2019	$ 164	$ 470	$ 634
Provision for restructuring charges	13,574	176	13,750
Cash payments	(10,768)	(68)	(10,836)
Other adjustments	3,356	(122)	3,234
Balance, June 30, 2020	$ 6,326	$ 456	$ 6,782

The remainder of the restructuring balance of $6.8 million at June 30, 2020 is primarily composed of $6.3 million of severance payments which we have paid, or expect to pay, during the third quarter of 2020, and $0.5 million of non-cancelable non-lease costs which we expect to pay over the terms of the related obligations through the first quarter of 2022.

7. Leases

We have operating leases primarily for corporate offices. Our leases have remaining lease terms of one to ten years, some of which include options to extend the leases for up to five years, and some of which include options to terminate within one year.

The components of lease expenses were as follows (in thousands):

	Three Months Ended June 30, 2020	**Six Months Ended June 30, 2020**
Operating lease costs	$ 4,263	$ 8,681
Short-term lease costs	522	1,049
Sublease income	(223)	(497)
Total net lease costs	$ 4,562	$ 9,233

Supplemental balance sheet information related to leases is as follows (in thousands, except lease term and discount rate):

	As of June 30, 2020
Operating leases:	
Operating lease right-of-use assets, net	$ 54,572
Operating lease liabilities, current	$ 18,545
Operating lease liabilities, non-current	64,611
Total operating lease liabilities	$ 83,156
Weighted average remaining lease term (in years)	6.7
Weighted average discount rate	6.8%

Supplemental cash flow and other information related to leases is as follows (in thousands):

	Three Months Ended June 30, 2020	Six Months Ended June 30, 2020
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 5,625	$ 10,355
Lease liabilities arising from obtaining right-of-use assets:		
Operating leases	$ —	$ 478

Undiscounted cash flows of operating lease liabilities are as follows (in thousands):

Years Ending December 31,	Amount
2020 (remaining six months)	$ 9,171
2021	18,423
2022	14,984
2023	13,065
2024	11,782
2025	11,330
2026 and thereafter	26,441
Total lease payments	105,196
Less: imputed interest	(22,040)
Total lease obligations	83,156
Less: current lease obligations	(18,545)
Long-term lease obligations	$ 64,611

As of June 30, 2020, we did not have any additional operating lease commitments for office leases that have not yet commenced.

8. Deferred Revenue

Deferred revenue consisted of the following (in thousands):

	As of June 30, 2020	As of December 31, 2019
Product, subscription and support, current	$ 478,823	$ 508,580
Professional services, current	84,367	95,364
Total deferred revenue, current	563,190	603,944
Product, subscription and support, non-current	328,965	369,589
Professional services, non-current	691	1,034
Total deferred revenue, non-current	329,656	370,623
Total deferred revenue	$ 892,846	$ 974,567

Changes in the balance of deferred revenue for the periods presented are as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Deferred revenue, beginning of period	$ 919,856	$ 906,190	$ 974,567	$ 934,828
Billings for the period	202,890	221,417	372,901	403,323
Revenue recognized	(229,900)	(217,608)	(454,622)	(428,152)
Assumed in connection with acquisitions	—	2,750	—	2,750
Deferred revenue, end of period	$ 892,846	$ 912,749	$ 892,846	$ 912,749

Remaining Performance Obligations

Transaction price allocated to remaining performance obligations represents contracted revenue that has not yet been recognized, which includes deferred revenue and non-cancelable contracts that will be invoiced and recognized as revenue in future periods ("backlog"). While deferred revenue is recorded on our balance sheet as a liability, backlog is not recorded in revenue, deferred revenue or elsewhere in our consolidated financial statements until we establish a contractual right to invoice, at which point it is recorded as revenue or deferred revenue as appropriate. As of June 30, 2020, the aggregate amount of the transaction price allocated to remaining performance obligations was $892.8 million in deferred revenue and $18.1 million in backlog.

We expect that the amount of backlog relative to the total value of our contracts will change from year to year due to several factors, including the amount invoiced early in the contract term, the timing and duration of customer agreements, varying invoicing cycles of agreements and changes in customer financial circumstances. Accordingly, we believe that fluctuations in backlog are not always a reliable indicator of future revenues and we do not utilize backlog internally as a key management metric.

We expect to recognize these remaining performance obligations as follows (in percentages):

	Total	Less than 1 year	1-2 years	2-3 years	More than 3 years
Deferred revenue	100%	63%	24%	10%	3%
Backlog	100%	56%	32%	11%	1%

9. Convertible Senior Notes

Convertible Senior Notes due 2024

On May 24, 2018, we issued $525.0 million aggregate principal amount of 0.875% Convertible Senior Notes due 2024 (the "2024 Notes") in a private placement to qualified institutional purchasers pursuant to an exemption from registration provided by Section 4(a)(2) and Rule 144A under the Securities Act of 1933, as amended (the "Securities Act"). In addition, on June 5, 2018, we issued an additional $75.0 million aggregate principal amount of the 2024 Notes pursuant to the full exercise of the initial purchasers' option to purchase additional 2024 Notes, in a private placement exempt from the registration requirements of the Securities Act. The net proceeds from the offerings, after deducting the initial purchasers' discount of approximately $15.0 million and the issuance costs of approximately $0.6 million, were $584.4 million. We used (i) approximately $330.4 million of the net proceeds to repurchase approximately $340.2 million in aggregate principal amount outstanding of the Series A Notes (as defined below) in negotiated transactions with institutional investors and (ii) approximately $65.2 million of the net proceeds from the offering of the 2024 Notes to enter into capped call transactions (the "Capped Calls").

The 2024 Notes are unsecured obligations and rank senior in right of payment to any of our indebtedness that is expressly subordinated in right of payment to the 2024 Notes. They rank equally in right of payment with all of our existing and future liabilities that are not expressly subordinated to the 2024 Notes, including the Series A Notes and the Series B Notes (as defined below); and effectively rank junior in right of payment to any of our secured indebtedness to the extent of the value of the assets securing such indebtedness. The 2024 Notes are structurally junior to all indebtedness and other liabilities (including trade payables) of our subsidiaries.

The 2024 Notes do not contain any financial covenants and do not restrict us from paying dividends or issuing or repurchasing other securities.

The 2024 Notes bear interest at 0.875% per year, payable semiannually in arrears on June 1 and December 1 of each year, beginning December 1, 2018. The 2024 Notes mature on June 1, 2024, unless earlier repurchased, redeemed or converted.

The initial conversion rate of the 2024 Notes is 43.1667 shares of our common stock per $1,000 of principal amount of the 2024 Notes, which is equivalent to an initial conversion price of approximately $23.17 per share of common stock. The conversion rate of the 2024 Notes may be adjusted pursuant to the terms of the indenture governing the 2024 Notes upon the occurrence of certain specified events, but not for accrued and unpaid interest.

Holders may convert the 2024 Notes at their option in multiples of $1,000 principal amount prior to the business day preceding March 1, 2024, only under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ended on September 30, 2018 (and only during such calendar quarter), if the last reported sale price of the common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price of the 2024 Notes on each applicable trading day;
- during the five business day period after any five consecutive trading day period (the "measurement period") in which the trading price per $1,000 principal amount of the 2024 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate for the notes on each such trading day;
- if we call any or all of the 2024 Notes for redemption, at any time prior to the close of business on the scheduled trading day immediately preceding the relevant redemption date; or
- upon the occurrence of specified corporate events, as specified in each indenture governing the 2024 Notes.

Regardless of the foregoing conditions, holders may convert their 2024 Notes at their option in multiples of $1,000 principal amount during the period from, and including, March 1, 2024 to the close of business on the second scheduled trading day immediately preceding the maturity date. Upon conversion, the 2024 Notes can be settled in cash, shares of our common stock or any combination of cash and shares of common stock at our option.

Holders may also require us to repurchase the 2024 Notes if we undergo a "fundamental change," as defined in each indenture governing the 2024 Notes, at a repurchase price equal to 100% of the principal amount, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

Additionally, we may redeem for cash all or any portion of the 2024 Notes on or after June 5, 2021, if the last reported sale price of our common stock has been at least 130% of the conversion price of the 2024 Notes then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) immediately preceding the date on which we provide notice of redemption at a redemption price equal to 100% of the principal amount of the notes to be redeemed, plus any accrued and unpaid interest to, but excluding, the redemption date.

As of June 30, 2020, none of the conditions permitting holders to convert their 2024 Notes had been satisfied and no shares of our common stock had been issued in connection with any conversions of the 2024 Notes. Based on the closing price of our common stock of $12.18 per share on June 30, 2020, the conversion value of the 2024 Notes was less than the principal amount of the 2024 Notes outstanding on a per 2024 Note basis.

In accordance with accounting for debt with conversions and other options, we bifurcated the principal amount of the 2024 Notes into liability and equity components. The initial liability component of the 2024 Notes was valued at $458.3 million based on the contractual cash flows discounted at an appropriate comparable market non-convertible debt borrowing rate at the date of issuance of 5.5% with the equity component representing the residual amount of the proceeds of $141.7 million, which was recorded as a debt discount. Issuance costs were allocated pro rata based on the relative initial carrying amounts of the liability and equity components. As a result, transaction costs of $0.5 million and $0.1 million and initial purchasers' discount of $11.5 million and $3.5 million were attributable to the liability component and equity component of the 2024 Notes, respectively. The debt discount and the issuance costs allocated to the liability component are amortized as additional interest expense over the term of the 2024 Notes using the effective interest method as noted in the table below.

The liability and equity components of the 2024 Notes consisted of the following (in thousands):

	As of June 30, 2020	As of December 31, 2019
	2024 Notes	2024 Notes
Liability component:		
Principal	$ 600,000	$ 600,000
Less: 2024 Notes discounts and issuance costs, net of amortization	(105,063)	(117,078)
Net carrying amount	$ 494,937	$ 482,922
Equity component, net of issuance costs	$ 138,064	$ 138,064

The unamortized issuance costs as of June 30, 2020 will be amortized over a weighted-average remaining period of approximately 3.9 years.

Interest expense related to the 2024 Notes consisted of the following (dollars in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	2024 Notes	2024 Notes	2024 Notes	2024 Notes
Coupon interest	$ 1,313	$ 1,313	$ 2,625	$ 2,625
Amortization of 2024 Notes discounts and issuance costs	6,044	5,754	12,015	11,438
Total interest expense recognized	$ 7,357	$ 7,067	$ 14,640	$ 14,063
Effective interest rate on the liability component	6.0%	6.1%	6.1%	6.1%

In connection with the 2024 Notes offering, we entered into the Capped Calls with certain counterparties affiliated with the initial purchasers of the 2024 Notes. The Capped Calls are expected to reduce potential dilution of earnings per share upon conversion of the 2024 Notes, and have an initial strike price of $23.17 per share, which corresponds to the initial conversion price of the 2024 Notes and which have a cap price of $34.32 per share. The Capped Calls do not meet the criteria for separate accounting as a derivative as they are indexed to our own stock and are accounted for as freestanding financial instruments. The premiums paid for the purchase of the Capped Calls in the amount of $65.2 million have been recorded as a reduction of the Company's additional paid-in capital in stockholder's equity in the accompanying Condensed Consolidated Financial Statements and fair values of the Capped Calls are not re-measured at each reporting period.

Convertible Senior Notes due 2035

In June 2015, we issued $460.0 million principal amount of 1.000% Convertible Senior Notes due 2035 (the "Series A Notes") and $460.0 million principal amount of 1.625% Convertible Senior Notes due 2035 (the “Series B Notes” and together with the Series A Notes, the "2035 Notes", and the 2035 Notes, together with the 2024 Notes, the "Convertible Senior Notes") in a private placement to qualified institutional purchasers pursuant to an exemption from registration provided by Section 4(a)(2) and Rule 144A under the Securities Act. The net proceeds after the initial purchasers' discount of $23.0 million and issuance costs of $0.5 million from the 2035 Notes were $896.5 million. The Series A Notes and Series B Notes bear interest at 1.000% per year and 1.625% per year, respectively, payable semiannually in arrears on June 1 and December 1 of each year, beginning December 1, 2015. The 2035 Notes mature on June 1, 2035, unless earlier repurchased, redeemed or converted.

The 2035 Notes are unsecured obligations and rank senior in right of payment to any of our indebtedness that is expressly subordinated in right of payment to the 2035 Notes. They rank equally in right of payment with all of our existing and future liabilities that are not expressly subordinated to the 2035 Notes and effectively rank junior in right of payment to any of our secured indebtedness to the extent of the value of the assets securing such indebtedness. They are structurally junior to all indebtedness and other liabilities (including trade payables) of our subsidiaries.

The 2035 Notes do not contain any financial covenants and do not restrict us from paying dividends or issuing or repurchasing our other securities.

The initial conversion rate on each series of 2035 Notes is 16.4572 shares of our common stock per $1,000 principal amount of 2035 Notes, which is equivalent to an initial conversion price of approximately $60.76 per share of common stock. The conversion rate of each series of 2035 Notes may be adjusted upon the occurrence of certain specified events, but not for accrued and unpaid interest.

Holders may convert the 2035 Notes at their option in multiples of $1,000 principal amount prior to March 1, 2035, excluding the period from March 1, 2022 to June 1, 2022 in the case of the Series B Notes, only under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ended on September 30, 2015 (and only during such calendar quarter), if the last reported sale price of the common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price for the 2035 Notes of the relevant series on each applicable trading day;
- during the five business day period after any five consecutive trading day period in which the trading price per $1,000 principal amount of Series A Notes or Series B Notes, as applicable, for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate for the notes of the relevant series on each such trading day;
- if we call any or all of the 2035 Notes of a series for redemption, at any time prior to the close of business on the scheduled trading day immediately preceding the relevant redemption date; or
- upon the occurrence of specified corporate events, as specified in each indenture governing the 2035 Notes.

Regardless of the foregoing conditions, holders may convert their 2035 Notes at their option in multiples of $1,000 principal amount at any time during the period from March 1, 2022 to June 1, 2022 in the case of the Series B Notes, or after March 1, 2035 until maturity for either series of 2035 Notes. Upon conversion, the 2035 Notes can be settled in cash, shares of our common stock or any combination thereof at our option.

We may be required by holders of the 2035 Notes to repurchase all or any portion of their 2035 Notes at 100% of the principal amount plus accrued and unpaid interest, on each of June 1, 2025 and June 1, 2030, in the case of the Series A Notes, and each of June 1, 2022, June 1, 2025 and June 1, 2030 in the case of the Series B Notes. Holders may also require us to repurchase the 2035 Notes if we undergo a "fundamental change," as defined in each indenture governing the 2035 Notes, at a purchase price equal to 100% of the principal amount, plus accrued and unpaid interest.

Additionally, we may redeem for cash all or any portion of the Series B Notes at any time prior to June 1, 2022 if the last reported sale price of our common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending not more than three trading days immediately preceding the date we provide notice of redemption. We also may redeem for cash all or any portion of the Series A Notes at any time prior to maturity and all or any portion of the Series B Notes on or after June 1, 2022 until maturity, regardless of the foregoing sale price condition.

In accordance with accounting for debt with conversions and other options, we allocated the principal amount of the 2035 Notes into liability and equity components. We also allocated the total amount of initial purchasers' discount and transaction costs incurred to the liability and equity components using the same proportions as the proceeds from the 2035 Notes. Transaction costs of $0.4 million and $0.1 million and initial purchasers' discount of $17.6 million and $5.4 million were attributable to the liability component and equity component of the 2035 Notes, respectively.

Repurchase of a portion of the Series A Notes

In May 2018, we used approximately $330.4 million of the net proceeds from the offering of the 2024 Notes to repurchase $340.2 million aggregate principal amount of the Series A Notes. The repurchase was accounted for as a partial extinguishment of the Series A Notes. The consideration of approximately $330.4 million used to repurchase the Series A Notes was allocated between the liability and equity components of the amount extinguished by determining the fair value of the liability component immediately prior to the debt extinguishment and allocating that portion of the repurchase price to the liability component in the amount of $317.4 million. The residual of the repurchase price of $13.0 million was allocated to the equity component of the Series A Notes as a reduction of additional paid-in capital. The fair value of the debt extinguished was calculated using a discount rate of 4.5%, representing an estimate of the

Company's borrowing rate at the date of repurchase with a remaining expected life of two years. As part of the repurchase, we wrote-off a portion of the unamortized debt issuance cost apportioned to the principal amount of Series A Notes repurchased. We also recorded a loss on partial extinguishment of the Series A Notes of $10.8 million in Other Expense, net, representing the difference between the consideration attributed to the liability component and the sum of the net carrying amount of the liability component and unamortized costs.

In June 2020, the Company delivered a notice to the holders of Series A Notes to notify such holders of their option to require the Company to repurchase their Series A Notes on June 1, 2020. Holders representing $96.4 million aggregate principal amount of Series A Notes chose to exercise their option to require the Company to repurchase their Series A Notes. The repurchase was accounted for as a partial extinguishment of the Series A Notes. The consideration of approximately $96.4 million was used to repurchase the Series A Notes. The fair value of the debt extinguished was deemed to be the same as the par value of $96.4 million and no gain or loss was recognized.

As of June 30, 2020, $23.4 million aggregate principal amount of the Series A Notes remained outstanding.

The liability and equity components of the remaining portion of 2035 Notes consisted of the following (in thousands):

	As of June 30, 2020		As of December 31, 2019	
	Series A Notes	Series B Notes	Series A Notes	Series B Notes
Liability component:				
Principal	$ 23,436	$ 460,000	$ 119,828	$ 460,000
Less: 2035 Notes discount and issuance costs, net of amortization	—	(39,837)	(2,540)	(49,650)
Net carrying amount	$ 23,436	$ 420,163	$ 117,288	$ 410,350
Equity component, net of issuance costs	$ 15,559	$ 117,834	$ 79,555	$ 117,834

The unamortized discounts and issuance costs as of June 30, 2020 will be amortized over a weighted-average remaining period of approximately 1.9 years.

Interest expense for the three and six months ended June 30, 2020 related to the 2035 Notes consisted of the following (dollars in thousands):

	Three Months Ended June 30, 2020		Six Months Ended June 30, 2020	
	Series A Notes	Series B Notes	Series A Notes	Series B Notes
Coupon interest	$ 219	$ 1,869	$ 519	$ 3,738
Amortization of 2035 Notes discount and issuance costs	1,023	4,935	2,540	9,812
Total interest expense recognized	$ 1,242	$ 6,804	$ 3,059	$ 13,550
Effective interest rate on the liability component	4.2%	6.6%	5.2%	6.6%

Interest expense for the three and six months ended June 30, 2019 related to the 2035 Notes consisted of the following (dollars in thousands):

	Three Months Ended June 30, 2019		Six Months Ended June 30, 2019	
	Series A Notes	Series B Notes	Series A Notes	Series B Notes
Coupon interest	$ 300	$ 1,869	$ 599	$ 3,717
Amortization of 2035 Notes discount and issuance costs	1,460	4,707	2,902	9,359
Total interest expense recognized	$ 1,760	$ 6,576	$ 3,501	$ 13,076
Effective interest rate on the liability component	6.2%	6.6%	6.3%	6.7%

Prepaid Forward Stock Purchase

In connection with the issuance of the 2035 Notes, we also entered into privately negotiated prepaid forward transactions (the "Prepaid Forwards") with one of the initial purchasers of the 2035 Notes (the "Forward Counterparty"), pursuant to which we paid approximately $150.0 million. The amount of the Prepaid Forward entered into in connection with the issuance of the Series A Notes was equivalent to approximately 1.6 million shares which was settled on June 3, 2020. The amount of the Prepaid Forward entered into in connection with the issuance of the Series B Notes was equivalent to approximately 1.8 million shares which is to be settled on or around June 1, 2022, subject to any early settlement, in whole or in part, of such Prepaid Forward. Such Prepaid Forward is intended to facilitate privately negotiated derivative transactions by which investors in the Series B Notes will be able to hedge their investment in the Series B Notes. In the event we pay any cash dividends on our common stock, the Forward Counterparty will pay an equivalent amount back to us.

The related shares were accounted for as a repurchase of common stock, and are presented as Treasury Stock in the unaudited condensed consolidated balance sheets. On June 3, 2020, we retired approximately 1.6 million shares delivered under the Prepaid Forward entered into in connection with the issuance of the Series A Notes. The remaining approximately 1.8 million shares of common stock purchased under the Prepaid Forward entered into in connection with the issuance of the Series B Notes are excluded from weighted-average shares outstanding for basic and diluted EPS purposes although they remain legally outstanding.

10. Commitments and Contingencies

Letters of Credit

We were party to letters of credit totaling $3.6 million and $3.6 million as of June 30, 2020 and December 31, 2019, respectively, issued primarily in support of operating leases for several of our facilities. These letters of credit are collateralized by a line with our bank. No amounts have been drawn against these letters of credit.

Contract Manufacturer Commitments

Our independent contract manufacturers procure components and assemble our products based on our forecasts. These forecasts are based on estimates of future demand for our products, which are in turn based on historical trends and an analysis from our sales and product marketing organizations, adjusted for overall market conditions. In order to reduce manufacturing lead times and plan for adequate supply, we may issue forecasts and orders for components and products that are non-cancelable. As of June 30, 2020 and December 31, 2019, we had non-cancelable open orders with our contract manufacturers of $4.1 million and $5.0 million, respectively. We are required to record a liability for firm, non-cancelable and unconditional purchase commitments with contract manufacturers and suppliers for quantities in excess of our future demand forecasts. As of June 30, 2020, we have not incurred nor accrued any significant liabilities for such non-cancelable commitments.

Purchase Obligations

As of June 30, 2020, we had approximately $18.0 million of non-cancelable firm purchase commitments primarily for purchases of software and services. In situations where we have received delivery of the goods or services as of June 30, 2020 under purchase orders outstanding as of the same date, such amounts are reflected in the condensed consolidated balance sheet as accounts payable or accrued liabilities and are excluded from the $18.0 million.

Litigation

From time to time, we are involved in claims and legal proceedings that arise in the ordinary course of business. Any claims or proceedings against us, whether meritorious or not, could be time consuming, result in costly litigation, require significant amounts of management time, result in the diversion of significant operational resources, or require us to enter into agreements which may not be available on terms favorable to us or at all.

To the extent there is a reasonable possibility that a loss exceeding amounts already recognized may be incurred, and the amount of such additional loss would be material, we will either disclose the estimated additional loss or state that such an estimate cannot be made. We do not currently believe that it is reasonably possible that additional losses in connection with litigation arising in the ordinary course of business would be material.

Indemnification

Under the indemnification provisions of our standard sales related contracts, we agree to defend our customers against third-party claims asserting infringement of certain intellectual property rights, which may include patents, copyrights, trademarks, or trade secrets, and to pay judgments entered on such claims. Our exposure under these indemnification provisions is generally limited to the total amount paid by our customer under the agreement. However, certain agreements include indemnification provisions that could potentially expose us to losses in excess of the amount received under the agreement. In addition, we indemnify our officers, directors, and certain key employees for actions taken while they are or were serving in good faith in such capacities. Through June 30, 2020, there have been no claims under any indemnification provisions.

11. Common Shares Reserved for Issuance

Under our amended and restated certificate of incorporation, we are authorized to issue 100,000,000 shares of convertible preferred stock with a par value of $0.0001 per share, none of which were issued and outstanding as of June 30, 2020 or December 31, 2019.

Under our amended and restated certificate of incorporation, we are authorized to issue 1,000,000,000 shares of common stock with a par value of $0.0001 per share as of June 30, 2020 and December 31, 2019. Each share of common stock outstanding is entitled to one vote. The holders of common stock are also entitled to receive dividends whenever funds are legally available and when declared by our Board of Directors, subject to the prior rights of holders of all classes of convertible preferred stock outstanding.

We had reserved shares of common stock for issuance as follows (in thousands):

	As of June 30, 2020	As of December 31, 2019
Reserved under stock award plans	42,528	37,982
Convertible senior notes	33,856	35,442
Employee Stock Purchase Plan (ESPP)	4,316	3,428
Total	80,700	76,852

12. Equity Award Plans

We have operated under our 2013 Equity Incentive Plan ("2013 Plan") since our initial public offering ("IPO") in September 2013. Our 2013 Plan provides for the issuance of restricted stock and the granting of options, stock appreciation rights, performance shares, performance units and restricted stock units to our employees, officers, directors and consultants. Our 2013 Plan provides for annual increases in the number of shares available for issuance on the first day of each fiscal year. Awards granted under the 2013 Plan vest over the periods determined by our Board of Directors or compensation committee of our Board of Directors, generally four years, and stock options granted under the 2013 Plan expire no more than ten years after the date of grant. In the case of an incentive stock option granted to an employee who at the time of grant owns stock representing more than 10% of the total combined voting power of all classes of stock, the exercise price shall be no less than 110% of the fair value per share on the date of grant, and the award shall expire five years from the date of grant. For options granted to any other employee, the per share exercise price shall be no less than 100% of the fair value per share on the date of grant. In the case of non-statutory stock options and options granted to consultants, the per share exercise price shall be no less than 100% of the fair value per share on the date of grant. Although our 2013 Plan provides for the granting of options, we no longer utilize them as part of our overall compensation program. Stock that is purchased prior to vesting is subject to our right of repurchase at any time following termination of the participant's service for so long as such stock remains unvested. Approximately 16.4 million shares and 11.9 million shares of our common stock were reserved for future grants as of June 30, 2020 and December 31, 2019, respectively, under the 2013 Plan.

Our 2013 Employee Stock Purchase Plan ("ESPP") allows eligible employees to acquire shares of our common stock at 85% of the lower of the fair market value of our common stock on the first trading day of each offering period or on the exercise date. Our ESPP provides for annual increases in the number of shares available for issuance on the first day of each fiscal year. An aggregate of approximately 4.3 million shares and 3.4 million shares of common stock were available for future issuance as of June 30, 2020 and December 31, 2019, respectively, under our ESPP.

From time to time, we also grant restricted common stock or restricted stock awards outside of our equity incentive plans to certain employees in connection with acquisitions.

Stock Option Activity

A summary of the activity for our stock option changes during the reporting period and a summary of information related to options outstanding and options exercisable are presented below (in thousands, except per share amounts and contractual life years):

	Options Outstanding			
	Number of Shares	**Weighted-Average Exercise Price (per share)**	**Weighted-Average Contractual Life (years)**	**Aggregate Intrinsic Value**
Balance — December 31, 2019	4,391	$ 9.07	5.2	$ 45,931
Exercised	(780)	4.79		6,260
Cancelled	(186)	16.31		
Balance — June 30, 2020	3,425	$ 9.65	4.8	$ 22,061
Options exercisable — June 30, 2020	2,449	$ 12.09	3.4	$ 13,607

The aggregate intrinsic value above represents the pre-tax difference between the exercise price of stock options and the quoted market price of our stock on that day for all in-the-money stock options.

Restricted Stock Award ("RSA") and Restricted Stock Unit ("RSU") Activity

A summary of the activity for our restricted common stock, RSAs and RSUs during the reporting periods and a summary of information related to unvested restricted common stock, RSAs and RSUs, including those expected to vest based on the achievement of a performance condition, are presented below (in thousands, except per share amounts and contractual life years):

	Number of Shares	**Weighted-Average Grant Date Fair Value (per share)**	**Weighted-Average Contractual Life (years)**	**Aggregate Intrinsic Value**
Unvested balance — December 31, 2019	21,697	$ 16.07	1.2	$ 358,651
Granted	12,757	15.26		
Vested	(6,130)	15.18		
Cancelled	(5,644)	16.71		
Unvested balance — June 30, 2020	22,680	$ 15.49	1.5	$ 276,237
Unvested awards for which the requisite service period has not been rendered and vesting is subject to the achievement of a performance condition — June 30, 2020	1,361	$ 13.65	1.7	$ 16,575

Stock-Based Compensation

We record stock-based compensation based on the fair value as determined on the date granted. We determine the fair value of stock options and shares of common stock to be issued under the ESPP using the Black-Scholes option-pricing model. The fair value of restricted stock units and restricted stock awards equals the market value of the underlying stock on the date of grant. We grant performance-based restricted stock units and restricted stock awards to certain employees which vest upon the achievement of certain performance conditions, subject to the employees' continued service relationship with us. With respect to performance-based restricted stock units, we assess the probability of vesting at each reporting period and adjust our compensation cost based on this probability assessment. We recognize such compensation expense on a straight-line basis over the service providers' requisite service period.

The following table summarizes the assumptions used in the Black-Scholes option-pricing model to determine fair value of our common shares to be issued under the ESPP for the offering periods beginning in May 2019:

	Three and Six Months Ended June 30, 2020	**Three and Six Months Ended June 30, 2019**
Fair value of common stock	$13.06	$14.59
Risk-free interest rate	0.17% - 0.18%	2.21% - 2.35%
Expected term (in years)	0.5 - 1.0	0.5 - 1.0
Volatility	52% - 68%	39%
Dividend yield	—%	—%

Stock-based compensation expense related to stock options, ESPP and restricted stock unit awards is included in the condensed consolidated statements of operations as follows (in thousands):

	Three Months Ended June 30,		**Six Months Ended June 30,**	
	2020	**2019**	**2020**	**2019**
Cost of product, subscription and support revenue	$ 4,051	$ 3,964	$ 7,792	$ 7,911
Cost of professional services revenue	4,450	3,641	8,351	7,350
Research and development	9,861	11,889	21,406	24,313
Sales and marketing	11,410	13,227	22,896	25,767
General and administrative	6,981	7,430	12,486	15,133
Restructuring	293	—	293	—
Total	$ 37,046	$ 40,151	$ 73,224	$ 80,474

As of June 30, 2020, total compensation cost related to stock-based awards not yet recognized was $336.5 million, which is expected to be amortized on a straight-line basis over the weighted-average remaining vesting period of approximately 2.8 years.

13. Income Taxes

We account for income taxes under the asset and liability method. Under this method, deferred income tax assets and liabilities are determined based upon the difference between the financial statement carrying amounts and the tax basis of assets and liabilities and are measured using the enacted tax rate expected to apply to taxable income in the years in which the differences are expected to be reversed.

We recognized a provision for income taxes of $1.1 million and $0.5 million for the three months ended June 30, 2020 and 2019, respectively. We recognized a provision for income taxes of $2.0 million and $2.7 million for the six months ended June 30, 2020 and 2019, respectively. The provision for income taxes was primarily comprised of income taxes in foreign jurisdictions and withholding taxes, offset by tax benefits from business combinations.

On March 27, 2020, the Coronavirus Aid, Relief and Economic Security (CARES) Act was enacted and signed into U.S. law to provide economic relief to individuals and businesses facing economic hardship as a result of the COVID-19 pandemic. Changes in tax laws or rates are accounted for in the period of enactment. The income tax provisions of the CARES Act do not have a significant impact on our current taxes, deferred taxes, or uncertain tax positions.

14. Net Loss per Share

Basic net loss per share is calculated by dividing net loss by the weighted average number of common shares outstanding during the period, less shares subject to repurchase, and excludes any dilutive effects of employee share-based awards and options. Diluted net income per common share is computed giving effect to all potentially dilutive common shares, including common stock issuable upon exercise of stock options, conversion of the Convertible Senior Notes, and unvested restricted common stock and stock units. As we had net losses for the three and six months ended June 30, 2020 and 2019, all potential common shares were determined to be anti-dilutive.

The following table sets forth the computation of net loss per common share (in thousands, except per share amounts):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Numerator:				
Net loss	$ (53,276)	$ (67,323)	$ (129,582)	$ (142,698)
Denominator:				
Weighted average number of shares outstanding—basic and diluted	221,352	204,109	219,570	201,001
Net loss per share—basic and diluted	$ (0.24)	$ (0.33)	$ (0.59)	$ (0.71)

The following outstanding options and unvested shares were excluded (as common stock equivalents) from the computation of diluted net loss per common share for the periods presented as their effect would have been anti-dilutive (in thousands):

	As of June 30,	
	2020	2019
Options to purchase common stock	3,425	5,018
Unvested restricted stock awards and units	22,680	24,121
Convertible senior notes	33,856	35,442
ESPP shares	198	171

15. Employee Benefit Plan

401(k) Plan

We have established a 401(k) tax-deferred savings plan (the “401(k) Plan”) which permits participants to make contributions by salary deduction pursuant to Section 401(k) of the Internal Revenue Code of 1986, as amended. All participants’ interests in their deferrals are 100% vested when contributed. We are responsible for administrative costs of the 401(k) Plan and have made no matching contributions into our 401(k) Plan since inception. Under the 401(k) Plan, pre-tax contributions are allocated to each participant’s individual account and are then invested in selected investment alternatives according to the participants’ directions. The 401(k) Plan is intended to qualify under Sections 401(a) and 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) Plan and earnings on those contributions are not taxable to the employees until distributed, and all contributions are deductible by us when and if made.

16. Segment and Major Customers Information

Disaggregation of revenue by geography

We conduct business globally and are primarily managed on a geographic basis. Our Chief Executive Officer, who is our chief operating decision maker, reviews financial information presented on a consolidated basis accompanied by information about revenue by geographic region for purposes of allocating resources and evaluating financial performance. We define our regions into United States ("U.S."), Europe, the Middle East, and Africa ("EMEA"), Asia Pacific and Japan ("APAC"), and all remaining geographies (primarily Latin America and Canada) included in Others. There are no segment managers who are held accountable for operations, operating results, and plans for levels, components, or types of products or services below the consolidated unit level. Accordingly, we are considered to be in a single reportable segment and operating unit structure.

Revenue by geographic region based on the billing address is as follows (in thousands):

	Three Months Ended June 30,							
	2020	2019	2020	2019	2020	2019	2020	2019
	U.S.		EMEA		APAC		Other	
Product and related subscription and support	$ 58,506	$ 67,312	$ 20,476	$ 23,950	$ 20,564	$ 21,309	$ 4,258	$ 4,918
Platform, cloud subscription and managed services	49,833	38,539	10,858	8,704	8,608	6,537	4,202	2,832
Professional services	36,886	29,117	6,846	7,134	3,778	3,944	5,085	3,312
Total revenue	$ 145,225	$ 134,968	$ 38,180	$ 39,788	$ 32,950	$ 31,790	$ 13,545	$ 11,062

	Six Months Ended June 30,							
	2020	2019	2020	2019	2020	2019	2020	2019
	U.S.		EMEA		APAC		Other	
Product and related subscription and support	$ 118,495	$ 136,891	$ 41,082	$ 45,902	$ 41,287	$ 43,120	$ 8,628	$ 10,026
Platform, cloud subscription and managed services	95,845	72,518	21,034	17,061	17,404	12,923	7,613	5,564
Professional services	71,459	56,857	14,125	12,759	7,832	7,318	9,818	7,213
Total revenue	$ 285,799	$ 266,266	$ 76,241	$ 75,722	$ 66,523	$ 63,361	$ 26,059	$ 22,803

We generate revenue from sales of our network, email and endpoint security solutions, network forensics appliances, cloud threat intelligence and analytics subscriptions, managed security, our Mandiant professional services, our Helix security operations platform, and our Mandiant security validation platform (formerly Verodin security instrumentation platform). We disaggregate our revenue into two main categories: (i) product, subscription, and support and (ii) professional services.

Within the product, subscription and support category, we provide supplemental data to distinguish between solutions that are deployed on-premise on physical or virtual appliances, and solutions and managed services that are not dependent on appliances. These solutions include security delivered entirely through the cloud or delivered through hybrid on premise/cloud platform. Security solutions that are dependent on appliances are included in the product and related subscription and support sub-category, and solutions and managed services without dependency on appliances are included in the platform, cloud subscription and managed services sub-category.

In addition to our product, subscription and support solutions, we offer professional services, including incident response and other security consulting services, to our customers who have experienced a cyber security breach or desire assistance assessing the resilience of their information systems infrastructure. The majority of our professional services are offered on a time and materials basis, through a fixed fee arrangement, or on a retainer basis. Revenue from professional services is recognized as services are delivered. Revenue from our Expertise-on-Demand micro-services and some pre-paid professional services is deferred, and revenue is recognized when services are delivered.

The following table depicts the disaggregation of revenue according to revenue type and is consistent with how we evaluate our financial performance (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Product and related subscription and support	$ 103,804	$ 117,490	$ 209,492	$ 235,938
Platform, cloud subscription and managed services	73,501	56,612	141,896	108,067
Professional services	52,595	43,506	103,234	84,147
Total revenue	$ 229,900	$ 217,608	$ 454,622	$ 428,152

Long lived assets by geography

Long lived assets by geographic region based on physical location is as follows (in thousands):

	As of June 30, 2020	As of December 31, 2019
Property and equipment, net:		
United States	$ 80,179	$ 85,287
International	7,226	8,525
Total property and equipment, net	$ 87,405	$ 93,812

For the three months ended June 30, 2020, one distributor represented 12% of our total revenue, but did not represent 10% or greater of our total revenue for the three months ended June 30, 2019. For each of the three months ended June 30, 2020 and 2019, one reseller represented 14% of our total revenue. Additionally, another distributor represented 13% of our total revenue for the three months ended June 30, 2019, but did not represent 10% or greater of our total revenue for the three months ended June 30, 2020.

For the six months ended June 30, 2020, one distributor represented 11% of our total revenue, but did not represent 10% or greater of our total revenue for the six months ended June 30, 2019. For each of the six months ended June 30, 2020 and 2019, one reseller represented 14% of our total revenue. Additionally, for the six months ended June 30, 2020 and 2019, another distributor represented 10% and 15%, respectively, of our total revenue.

As of June 30, 2020 and December 31, 2019, no customer represented 10% or more of our net accounts receivable balance.

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 our condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2019. The following discussion and analysis contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements include, but are not limited to, statements regarding:

- *the evolution of the threat landscape facing our customers and prospects;*
- *our ability, and the effects of our efforts, to educate the market regarding the advantages of our security solutions;*
- *our ability to continue to grow revenues, in particular annual recurring revenues from cloud and subscriptions;*
- *our expected rate of decline in mature appliance revenues and associated subscription and support revenues;*
- *our future financial and operating results;*
- *our business plan and our ability to effectively manage our growth and associated investments;*
- *our beliefs and objectives for future operations;*
- *our ability to maintain our leadership position in advanced network security;*
- *our ability to attract and retain customers and to expand our solutions footprint within each of these customers;*
- *our expectations concerning customer retention rates as well as expectations for the value of subscriptions and services renewals;*
- *our ability to maintain our competitive technological advantages against new entrants in our industry;*
- *our ability to timely and effectively scale and adapt our existing technology;*
- *our ability to innovate new products and bring them to market in a timely manner;*
- *our ability to maintain, protect, and enhance our brand and intellectual property;*
- *our ability to expand internationally;*
- *the effects of increased competition in our market and our ability to compete effectively;*
- *cost of revenue, including changes in costs associated with products, manufacturing and customer support;*
- *trends in operating expenses, including changes in research and development, sales and marketing, and general and administrative expenses;*
- *anticipated income tax rates;*
- *potential attrition and other impacts associated with restructuring;*
- *sufficiency of cash to meet cash needs for at least the next 12 months;*
- *our ability to generate cash flows from operations and free cash flows;*
- *our ability to capture new, and renew existing, contracts with the United States and international governments;*
- *our expectations concerning relationships with third parties, including channel partners and logistics providers;*
- *the release of new products;*
- *economic and industry trends or trend analysis;*
- *the impact of the COVID-19 pandemic and related public health measures on our business and the global economy;*
- *the attraction, training, integration and retention of qualified employees and key personnel;*
- *future acquisitions of or investments in complementary companies, products, subscriptions or technologies;*
- *our expectations, beliefs, plans, intentions and strategies related to our acquisition of Verodin, Inc. ("Verodin"); and*
- *the effects of seasonal trends on our results of operations.*

as well as other statements regarding our future operations, financial condition and prospects, and business strategies. Forward-looking statements generally can be identified by words such as "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "projects," "will be," "will continue," "will likely result," and similar expressions. These forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties, which could cause our actual results to differ

materially from those reflected in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this Quarterly Report on Form 10-Q, and in particular, the risks discussed under the caption "Risk Factors" in Item 1A of Part II of this Quarterly Report on Form 10-Q and those discussed in other documents we file with the SEC. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

Investors and others should note that we announce material financial information to our investors using our investor relations Web site (http://investors.fireeye.com/), SEC filings, press releases, public conference calls and webcasts. We use these channels, as well as social media, to communicate with the public about our company, our services and other issues. It is possible that the information we post on social media could be deemed to be material information.

Overview

We provide a broad portfolio of cybersecurity solutions and services that allow organizations to prepare for, prevent, respond to, investigate and remediate cyber attacks. Our products include detection and prevention solutions for network, email, endpoint and cloud security, forensics appliances, a security validation platform, subscription-based threat intelligence and analytics solutions, and our Helix security platform. These products are complemented by our technology-enabled managed detection and response services and our Mandiant incident response and strategic cyber security consulting services.

In March 2020, the World Health Organization declared the novel coronavirus disease (COVID-19) a global pandemic. We operate in geographic locations that have been impacted by COVID-19. The pandemic has impacted, and could further impact, our operations and the operations of our customers as a result of quarantines, various local, state and federal government public health orders, facility and business closures, and travel and logistics restrictions. We anticipate governments and businesses will likely take additional actions or extend existing actions to respond to the risks of the COVID-19 pandemic. While we instituted a global work-from-home policy towards the end of the first quarter of 2020, we did not incur significant disruptions during the three and six months ended June 30, 2020. We are continuing to actively monitor the impacts and potential impacts of the COVID-19 pandemic in all aspects of our business. Although we are unable to predict the impact of the COVID-19 pandemic on our business, results of operations, liquidity or capital resources at this time, we expect we may be negatively affected if the pandemic and related public health measures result in substantial manufacturing or supply chain problems, disruptions in local and global economies, volatility in the global financial markets, overall reductions in demand, delays in payment, restrictions on the shipment of our products, or other ramifications from the COVID-19 pandemic. For a further discussion of the uncertainties and business risks associated with the COVID-19 pandemic, see the section entitled "Risk Factors" in Part II, Item 1A of this Quarterly Report on Form 10-Q.

On April 23, 2020, the Board of Directors of the Company approved a restructuring plan to streamline the Company's operations to more closely align expenses to the Company's projected revenue, position the Company for improved operating performance and allow the Company to increase investment in the growth areas of the business. The restructuring plan resulted in the reduction of 6% of the Company's workforce as well as the exiting and downsizing of certain real estate facilities and the impairment of certain assets and consisted of severance, other one-time termination benefits and other restructuring related costs. These charges are primarily cash-based and have been recognized in the second quarter of 2020. The Company expects the restructuring will reduce total non-GAAP operating expenses by at least $25 million in 2020 compared to 2019. The actions associated with the restructuring plan were completed by the end of the second quarter of 2020.

Our Business Model

We generate revenue from sales of our network, email endpoint and cloud security solutions, our security validation platform, our threat intelligence, our managed detection and response services, our Helix security operations platform, and our Mandiant professional services. We disaggregate our revenue into two main categories: (i) product, subscription, and support and (ii) professional services. For the three months ended June 30, 2020 and 2019, product, subscription and support revenue as a percentage of total revenue was 77% and 80% respectively. For the six months ended June 30, 2020 and 2019, product, subscription and support revenue as a percentage of total revenue was 77% and 80%, respectively. Revenue from professional services was 23% and 20% for the three months ended June 30, 2020 and 2019 respectively. Revenue from professional services was 23% and 20% for the six months ended June 30, 2020 and 2019, respectively.

Product, subscription and support

Within the product, subscription and support category, we provide supplemental data to distinguish between sales of our product solutions that are deployed on-premise (or in hybrid on-premise/private cloud configurations), and sales of our platform, cloud-based subscriptions and managed detection and response services. Security product solutions deployed on-premise (or in hybrid on-premise/private cloud configurations) are included in the product and related subscription and support sub-category. Our security validation platform, Helix security platform, cloud-based security solutions, detection-on-demand, threat intelligence subscriptions and managed detection and response services are included in the platform, cloud subscription and managed services sub-category. For the three months ended June 30, 2020 and 2019, product and related subscription and support revenue as a percentage of total revenue was 45% and 54% respectively. For the six months ended June 30, 2020 and 2019, product and related subscription and support revenue as a percentage of total revenue was 46% and 55%, respectively. Revenue from platform, cloud subscription and managed services was 32% and 26% for the three months ended June 30, 2020 and 2019 respectively. Revenue from platform, cloud subscription and managed services was 31% and 25% for the six months ended June 30, 2020 and 2019, respectively.

Sales of our network, email, and endpoint security solutions, platform, cloud subscriptions and managed detection and response services, initially increase our deferred revenue. Deferred revenue from our product, subscription and support sales totaled $807.8 million and $878.2 million, as of June 30, 2020 and December 31, 2019, respectively. The decrease in deferred revenue from our product, subscription and support sales was due primarily to a decrease in sales of our appliance hardware and attached DTI cloud and support subscriptions compared to December 31, 2019.

Product and related subscription and support

Revenue in the product and related subscription and support sub-category consists primarily of revenue from sales of our network, email and endpoint security solutions that are deployed on the customer's premise, either as an integrated security appliance or in distributed hybrid on-premise/private cloud configurations. Both deployment options are available on pre-configured appliance hardware or as virtual sensors and include our detection and MVX analysis technologies, our DTI cloud updates and support services.

Integrated and distributed solutions deployed on virtual sensors are offered as an “all inclusive” subscription that includes our detection and MVX analysis technologies, DTI cloud updates, and support services. There is no limit to the number of virtual sensors a customer can deploy, and capacity can be distributed throughout the customer’s IT environment as needed. Subscription revenue is recognized ratably over the contractual term, typically one to three years. Customers purchasing our network and email security subscriptions have the option of purchasing our appliance hardware at additional cost, but are not required to do so.

Integrated network and email security solutions can also be deployed on pre-configured appliance hardware purpose-built for FireEye security solutions with scalable capacity. Integrated security appliances are delivered with pre-installed detection and MVX analysis technologies and require subscriptions to our DTI cloud updates and support services, which are priced as a percentage of the appliance price per year. Subscription terms are typically one to three years and include a material right of renewal. Historically, the majority of our installed base of on-premise network and email security customers purchased our solutions under this pricing model.

Since our network, email and endpoint security solutions require regular DTI cloud and software updates to maintain detection efficacy, physical appliances and virtual sensors, together with the related DTI cloud and support subscriptions are considered a single performance obligation, whether deployed as an integrated appliance, virtual sensor or in a distributed hybrid on-premise/cloud configuration.

As a single performance obligation, revenue from sales of appliance hardware and related subscriptions is recognized ratably over the contractual term, typically one to three years. Such contracts typically contain a material right of renewal option that allows the customer to renew their DTI cloud and support subscriptions for an additional term at a discount to the original purchase price of the single performance obligation. For contacts that contain a material right of renewal option, the value of the performance obligation allocated to the renewal is recognized ratably over the period between the end of the initial contractual term and end of the estimated useful life of the related appliance and license. A small portion of our revenue in the product and related subscription and support revenue is derived from the sale of our network forensics appliances and our central management system appliances. These appliances are not dependent on regular security intelligence updates, and revenue from these appliances is therefore recognized when ownership is transferred to our customer, typically at shipment.

Platform, cloud subscriptions and managed services

Revenue in the platform, cloud subscription and managed services sub-category consists primarily of revenue from sales of our cloud-based network, email and endpoint security, our detection-on-demand service, our security validation platform, our threat analytics platform (either standalone or within the Helix security platform), our Helix security platform, our standalone threat intelligence subscriptions and our managed detection and response services. The majority of revenue from our platform, cloud subscription and managed services category is recognized ratably over the contractual term, generally one to three years. A small portion of our revenue in the platform, cloud subscription and managed services category is derived from term licenses of our security validation platform, and revenue from these sales is recognized when the license key is issued to the customer.

Professional services

In addition to our product, subscription and support solutions, we offer professional services, including incident response and other strategic security consulting services, to our customers who have experienced a cyber security breach or desire assistance assessing and increasing the resilience of their IT environments to cyber attack. The majority our professional services are offered on a time and materials basis, through a fixed fee arrangement, or on a retainer basis. Revenue from professional services is recognized as services are delivered. Revenue from our Expertise-on-Demand subscription and some pre-paid professional services is deferred, and revenue is recognized when services are delivered. Deferred revenue from professional services as of June 30, 2020 and December 31, 2019 was $85.1 million and $96.4 million, respectively.

Key Business Metrics

We monitor our key business metrics set forth below to help us evaluate growth trends, establish budgets, measure the effectiveness of our sales and marketing efforts, and assess operational efficiencies. We discuss revenue and gross margin below under “Components of Operating Results.” Deferred revenue, annualized recurring revenue, billings (a non-GAAP metric), net cash provided by (used in) operating activities, and free cash flow (a non-GAAP metric) are discussed immediately below the following table (in thousands, except percentages).

	Three Months Ended or as of June 30,		Six Months Ended or as of June 30,	
	2020	2019	2020	2019
Product, subscription and support revenue	$ 177,305	$ 174,102	$ 351,388	$ 344,005
Professional services revenue	52,595	43,506	103,234	84,147
Total revenue	$ 229,900	$ 217,608	$ 454,622	$ 428,152
Year-over-year percentage increase	6%	7%	6%	7%
Gross margin percentage	65%	64%	64%	65%
Deferred revenue, (current and non-current)	$ 892,846	$ 912,749	$ 892,846	$ 912,749
Annualized recurring revenue	$ 598,081	$ 551,859	$ 598,081	$ 551,859
Billings (non-GAAP)	$ 202,890	$ 221,417	$ 372,901	$ 403,323
Net cash provided by (used in) operating activities	$ 14,690	$ (14,929)	$ (9,766)	$ 9,524
Free cash flow (non-GAAP)	$ 8,814	$ (29,666)	$ (27,322)	$ (18,716)

Deferred revenue. Our deferred revenue consists of amounts that we have the right to invoice but have not yet been recognized into revenue as of the end of the respective period. We monitor our deferred revenue balance because it represents a significant portion of revenue to be recognized in future periods. The majority of our deferred revenue consists of the unamortized balance of deferred revenue from previously invoiced sales of our security appliance hardware and non-cancelable contracts for subscriptions to our network, email and endpoint security solutions, Helix and security validation platforms, threat intelligence, managed detection and response services and support and maintenance contracts. Invoiced amounts for such contracts can be for multiple years, and we classify our deferred revenue as current or non-current depending on when we expect to recognize the related revenue. If the deferred revenue is expected to be recognized within 12 months it is classified as current, otherwise, the deferred revenue is classified as non-current. A table for our deferred revenue is provided below (in thousands):

	As of June 30,	
	2020	2019
Deferred revenue, current	$ 563,190	$ 545,876
Deferred revenue, non-current	329,656	366,873
Total deferred revenue	$ 892,846	$ 912,749

Annualized recurring revenue. Annualized recurring revenue ("ARR") is an operating metric and represents the annualized revenue run-rate of active term licenses, subscriptions, and support contracts at the end of a reporting period. ARR should be viewed independently of revenue and deferred revenue as ARR is an operating metric and is not intended to be combined with or replace these items. ARR is not a forecast of future revenue, which can be impacted by contract start and end dates and renewal rates, and does not include revenue from appliance hardware, perpetual software or professional services except for service level agreement payments. We consider ARR a useful measure of the value of the recurring components of our business because it reflects both our ability to attract new customers for our solutions and our success at retaining and expanding our relationships with existing customers. Further, ARR is not impacted by variations in contract length, enabling more meaningful comparison to prior periods as we align our invoicing practices to growing customer preference for annual billing on multi-year contracts. We disaggregate ARR by the same sub-categories we use for disaggregation of billings and revenue in the table below (in thousands):

	As of June 30,	
	2020	2019
Product and related subscription and support	$ 295,850	$ 313,135
Platform, cloud subscription and managed services	302,231	238,724
Total annualized recurring revenue	$ 598,081	$ 551,859

Billings. Billings is a non-GAAP financial metric that we define as revenue recognized in accordance with generally accepted accounting principles ("GAAP") plus the change in deferred revenue from the beginning to the end of the period, excluding deferred revenue assumed through acquisitions. We monitor billings as a supplement to revenue (the corresponding GAAP measure), because billings impact our deferred revenue, which is an important indicator of the health and visibility of trends in our business and represents a significant percentage of future revenue. However, it is important to note that other companies, including companies in our industry, may not use billings, may define billings differently, may have different billing frequencies, or may use other financial measures to evaluate their performance, all of which could reduce the usefulness of billings as a comparative measure. Additionally, the calculated billings metric represents the total contract value we have the right to invoice, which includes multi-year subscriptions to our solutions. Calculated billings is impacted by changes in average contract length, thereby reducing the usefulness of comparisons to prior periods. A reconciliation of billings to revenue, the most directly comparable financial measure calculated and presented in accordance with GAAP, is provided below (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Revenue	$ 229,900	$ 217,608	$ 454,622	$ 428,152
Add: deferred revenue, end of period	892,846	912,749	892,846	912,749
Less: deferred revenue, beginning of period	(919,856)	(906,190)	(974,567)	(934,828)
Less: deferred revenue assumed through acquisitions	—	(2,750)	—	(2,750)
Billings (non-GAAP)	$ 202,890	$ 221,417	$ 372,901	$ 403,323

We have provided disaggregation of billings below (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Product and related subscription and support	$ 79,363	$ 112,693	$ 154,596	$ 213,289
Platform, cloud subscription and managed services	73,957	63,181	126,411	106,294
Professional services	49,570	45,543	91,894	83,740
Billings (non-GAAP)	$ 202,890	$ 221,417	$ 372,901	$ 403,323

Net cash provided by (used in) operating activities. We monitor net cash provided by (used in) operating activities as a measure of our overall business performance. Our net cash provided by (used in) operating activities performance is driven in large part by sales of our products and from up-front payments for both subscriptions and support and maintenance services. Monitoring net cash provided by (used in) operating activities enables us to analyze our financial performance without the non-cash effects of certain items, such as depreciation, amortization and stock-based compensation costs, thereby allowing us to better understand and manage the cash needs of our business.

Free cash flow. Free cash flow is a non-GAAP financial measure we define as net cash provided by (used in) operating activities, the most directly comparable GAAP financial measure, less purchases of property and equipment and demonstration units. We consider free cash flow to be a liquidity measure that provides useful information to management and investors about the amount of cash generated by our business that, after the purchases of property and equipment and demonstration units, can be used by us for strategic opportunities, including investing in our business, making strategic acquisitions and strengthening our balance sheet. However, it is important to note that other companies, including companies in our industry, may not use free cash flow, may calculate free cash flow differently, or may use other financial measures to evaluate their performance, all of which could reduce the usefulness of free cash flow as a comparative measure. A reconciliation of free cash flow to cash flow provided by (used in) operating activities is provided below (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Net cash provided by (used in) operating activities	$ 14,690	$ (14,929)	$ (9,766)	$ 9,524
Less: purchase of property and equipment and demonstration units	(5,876)	(14,737)	(17,556)	(28,240)
Free cash flow (non-GAAP)	$ 8,814	$ (29,666)	$ (27,322)	$ (18,716)
Net cash provided by (used in) investing activities	$ 188,139	$ (72,194)	$ 167,909	$ (101,262)
Net cash provided by (used in) financing activities	$ (82,349)	$ 12,967	$ (88,400)	$ 13,810

Factors Affecting our Performance

Market Adoption. We rely on market education to raise awareness of today's cyber attacks and articulate the need for our security solutions and services. Our prospective customers often do not have a specific portion of their IT budgets allocated for our advanced security solutions. Additionally, the markets for security validation software such as our Mandiant security validation platform (formerly Verodin Security Instrumentation Platform) and security operations platforms such as FireEye Helix are in the early stages of development.

We invest heavily in sales and marketing efforts to increase market awareness, educate prospective customers and drive adoption of our products, subscriptions, platform and services. This market education is critical to creating new IT budget dollars or allocating more of existing IT budget dollars to advanced threat protection, security validation and security operations management solutions and, in particular, our solutions and services. The degree to which prospective customers recognize the mission critical need for our solutions will drive our ability to acquire new customers and increase renewals and follow-on sales opportunities, which, in turn, will affect our future financial performance.

Sales Productivity. Our sales organization consists of in-house sales teams who work in collaboration with external channel partners to identify new sales prospects, sell additional products, subscriptions and services, and provide post-sale support. Our direct sales teams are organized by territory to target large enterprise and government customers who typically have sales cycles that can last several months or more. We have also expanded our inside sales teams to work with channel partners to expand our customer base of small and medium enterprises, or SMEs, as well as manage renewals of subscription and support contracts.

Newly hired sales and marketing employees typically require several months to establish prospect relationships and achieve full sales productivity. In addition, although we believe our investments in market education have increased awareness of us and our solutions globally, sales teams in certain international markets may face local markets with limited awareness of us and our solutions, or have specific requirements that are not available with our solutions. These factors will influence the timing and overall levels of sales productivity, impacting the rate at which we will be able to convert prospects to sales and drive revenue growth.

Customer Acquisition and Retention. Since we expect that our existing customers are likely to expand their deployments and purchase additional solutions from us over time, we believe new customer acquisition and retention of existing customers is important to expanding the value of our installed base, which we monitor through our key business metrics, including annualized recurring revenue. We believe our ability to maintain strong customer retention and drive new customer acquisition will have a material impact on future sales of our security solutions and services and therefore our future financial performance.

Follow-On Sales. To grow our revenue, it is important that our customers make additional purchases of our products, subscriptions and services. After the initial sale to a new customer, we focus on expanding our relationship with the customer to sell additional products, subscriptions and services. Sales to our existing customer base can take the form of incremental sales of our solutions, managed services, and professional services either to expand their deployment of our technologies, to extend their internal security resources with our managed and professional security services, or continuously measure the effectiveness of their security controls. Our opportunity to expand our customer relationships through follow-on sales will increase as we add new customers, broaden our security solutions portfolio with additional subscriptions and services and enhance the functionality of our existing solutions. Follow-on sales lead to increased revenue over the lifecycle of a customer relationship and can significantly increase the return on our sales and marketing investments. With many of our large enterprise and government customers, we have realized follow-on sales that were multiples of the value of their initial purchases.

Components of Operating Results

Revenue

We generate revenue from the sales of our products, subscriptions and services. Revenue is recognized when a contract has been entered into with a customer, the performance obligation(s) is(are) identified, the transaction price is determined and has been allocated to the performance obligation(s) and only then for each performance obligation after we have satisfied that performance obligation.

- *Product, subscription and support revenue*. Our product, subscription and support revenue is generated from sales of our network, email, and endpoint security solutions deployed on the customer's premise (or in a hybrid on-premise/private cloud deployment), as well as our cloud-based security solutions, threat intelligence subscriptions, security validation and Helix security platforms, and managed detection and response services.

We combine our virtual sensors and physical appliances and software licenses with mandatory subscriptions to our DTI cloud updates and support services as a single performance obligation. As a result, we recognize revenue for this single performance obligation ratably over the contractual term. Contracts containing this single performance obligation typically contain a material right of renewal option. For contracts that contain a material right of renewal option, the allocated value of the performance obligation is recognized ratably over the period between the end of the initial contractual term and the end of the estimated useful life of the related appliance and license. Significant judgment is required in estimating the useful life of our intelligence dependent appliances and assessing the material rights associated with such products.

Revenue from our security validation and platform solutions, subscriptions to our cloud-based security and intelligence solutions, and our managed detection and response services is recognized ratably over the contractual term, typically one to three years.

- *Professional services revenue*. Professional services, which includes incident response, security assessments, and other strategic security consulting services, are offered on a time-and-material basis, through a fixed fee arrangement, or on a retainer basis. We recognize the associated revenue as the services are delivered. Some professional services and our Expertise-on-Demand subscription are prepaid, and revenue is deferred until services are delivered.

Cost of Revenue

Our total cost of revenue consists of cost of product, subscription and support revenue and cost of professional services revenue.

- *Cost of product, subscription and support revenue.* Cost of product, subscription and support revenue primarily consists of costs paid to our third-party contract manufacturers for our appliances, other costs in our manufacturing operations department, personnel costs associated with maintaining our threat intelligence, managed detection and response services, and global customer support operations, and hosting costs paid to third party cloud platform providers. Personnel costs associated with our manufacturing operations department, our threat intelligence, our managed detection and response services and our global customer support organization consist of salaries, benefits, bonuses and stock-based compensation. Overhead costs consist of certain facilities, depreciation and information technology costs. Our cost of product, subscription and support revenue also includes product testing costs, shipping costs and allocated overhead costs. If revenue from sales of product, subscriptions and support declines, the cost of product, subscription and support revenue may increase as a percentage of product, subscription and support revenue due to the fixed nature of a portion of these costs. Additionally, our appliance related cost of goods sold is capitalized and amortized on a systematic basis that is consistent with the pattern of transfer to which the asset relates.

- *Cost of professional services revenue.* Cost of professional services revenue primarily consists of personnel costs for our services organization and allocated overhead costs. If sales of our professional services decline or we are unable to maintain our changeability rates, our cost of professional services revenue may increase as a percentage of professional services revenue.

Gross Margin

Gross margin, or gross profit as a percentage of revenue, has been and will continue to be affected by a variety of factors, including our average selling prices, the mix between products, subscription and support and services sold, the mix of revenue among products, subscriptions and services and manufacturing costs. We expect our gross margins to fluctuate slightly over time depending on these factors.

Operating Expenses

Our operating expenses consist of research and development, sales and marketing and general and administrative expenses. Personnel costs are the most significant component of operating expenses and consist of salaries, benefits, bonuses, stock-based compensation and, with regard to sales and marketing expense, sales commissions. Operating expenses also include allocated overhead costs consisting of certain facilities, depreciation and information technology costs.

- *Research and development.* Research and development expense consists primarily of personnel costs and allocated overhead. Research and development expense also includes prototype related expenses. We expect research and development expense to stay relatively flat in terms of absolute dollars and remain relatively flat or decrease slightly as a percentage of total revenue.

- *Sales and marketing.* Sales and marketing expense consists primarily of personnel costs, incentive commission costs and allocated overhead. Commission costs are capitalized and amortized based on the useful life amortization period, taking into consideration the pattern of transfer to which the asset relates and the expected renewal periods during which renewal commissions are not commensurate with the initial commissions paid. When initial commissions are higher than (not-commensurate with) renewal commissions, we recognize the incremental portion of initial commissions over an estimated renewal period. The commensurate portion will be recognized over the same period as the initial revenue arrangement to which it relates.

Sales and marketing expense also includes costs for market development programs, promotional and other marketing activities, travel, depreciation of proof-of-concept evaluation units and outside consulting costs. These costs are recognized as incurred. We expect sales and marketing expense to stay relatively flat in absolute dollars and remain relatively flat or decrease slightly as a percentage of total revenue.

- *General and administrative*. General and administrative expense consists of personnel costs, professional service costs and allocated overhead. General and administrative personnel include our executive, finance, human resources, facilities and legal organizations. Professional service costs consist primarily of legal, auditing, accounting and other consulting costs. We expect general and administrative expense to stay relatively flat in terms of absolute dollars and remain relatively flat or decrease slightly as a percentage of total revenue.

- *Restructuring charges.* In April 2020, we implemented a restructuring plan designed to align our resources with the strategic initiatives of the business. This restructuring plan resulted in a reduction of 6% our total workforce as well as the exiting and downsizing of certain real estate facilities and the impairment of certain assets. The expenses incurred primarily consisted of employee severance charges and other termination benefits, as well as real estate and related fixed asset charges for the consolidation of certain leased facilities.

Interest Income

Interest income consists of interest earned on our cash and cash equivalent and investment balances. We have historically invested our cash in money-market funds and other short-term, high quality securities. We expect interest income to vary each reporting period depending on our average cash and cash equivalent and investment balances during the respective reporting periods, types and mix of investments and market interest rates.

Interest Expense

Interest expense consists primarily of interest at the stated rate (coupon) and amortization of discounts and issuance costs relating to our convertible notes. We expect interest expense to decrease slightly as a result of the repurchase of Series A Notes in June of 2020.

Other Income (Expense), Net

Other income (expense), net includes gains or losses on the disposal of fixed assets, gains or losses from our equity-method investment, gains or losses on the extinguishment of convertible notes, foreign currency re-measurement gains and losses and foreign currency transaction gains and losses. We expect other income (expense), net to fluctuate primarily as a result of foreign exchange rate movements.

Provision for (Benefit from) Income Taxes

Provision for income taxes relates primarily to income taxes payable in foreign jurisdictions where we conduct business, withholding taxes, and state income taxes in the United States. The provision is offset by tax benefits primarily related to the reversal of valuation allowances previously established against our deferred tax assets. Should the tax benefits exceed the provision, then a net tax benefit from income taxes is reflected for the period. Income in certain countries may be taxed at statutory tax rates that are lower than the U.S. statutory tax rate. As a result, our overall effective tax rate over the long-term may be lower than the U.S. federal statutory tax rate due to net income being subject to foreign income tax rates that are lower than the U.S. federal statutory rate.

Results of Operations

The following table summarizes our results of operations for the periods presented and as a percentage of our total revenue for those periods. The period-to-period comparison of results is not necessarily indicative of results for future periods.

	Three Months Ended June 30,			
	2020		2019	
	Amount	% of total Revenue	Amount	% of total Revenue
	(Dollars in thousands)			
Revenue:				
Product, subscription and support	$ 177,305	77 %	$ 174,102	80 %
Professional services	52,595	23	43,506	20
Total revenue	229,900	100	217,608	100
Cost of revenue:				
Product, subscription and support	54,026	23	53,198	24
Professional services	26,967	12	24,195	11
Total cost of revenue	80,993	35	77,393	36
Total gross profit	148,907	65	140,215	64
Operating expenses:				
Research and development	60,596	26	67,538	31
Sales and marketing	90,042	39	101,494	47
General and administrative	25,281	11	27,926	13
Restructuring charges	12,558	5	—	—
Total operating expenses	188,477	82	196,958	91
Operating loss	(39,570)	(17)	(56,743)	(26)
Interest income	2,863	1	6,137	3
Interest expense	(15,356)	(7)	(15,407)	(7)
Other expense, net	(119)	—	(770)	—
Loss before income taxes	(52,182)	(23)	(66,783)	(31)
Provision for income taxes	1,094	—	540	—
Net loss	$ (53,276)	(23)%	$ (67,323)	(31)%

	Six Months Ended June 30,			
	2020		2019	
	Amount	% of total Revenue	Amount	% of total Revenue
	(Dollars in thousands)			
Revenue:				
Product, subscription and support	$ 351,388	77 %	$ 344,005	80 %
Professional services	103,234	23	84,147	20
Total revenue	454,622	100	428,152	100
Cost of revenue:				
Product, subscription and support	107,162	24	101,666	24
Professional services	55,417	12	47,295	11
Total cost of revenue	162,579	36	148,961	35
Total gross profit	292,043	64	279,191	65
Operating expenses:				
Research and development	128,099	28	134,933	32
Sales and marketing	190,242	42	205,390	48
General and administrative	52,710	12	55,302	13
Restructuring charges	23,532	5	3,799	—
Total operating expenses	394,583	87	399,424	93
Operating loss	(102,540)	(23)	(120,233)	(28)
Interest income	7,287	2	11,985	3
Interest expense	(31,202)	(7)	(30,670)	(7)
Other expense, net	(1,108)	—	(1,058)	—
Loss before income taxes	(127,563)	(28)	(139,976)	(33)
Provision for income taxes	2,019	—	2,722	1
Net loss	$ (129,582)	(29)%	$ (142,698)	(33)%

Comparison of the Three Months Ended June 30, 2020 and 2019

Revenue

	Three Months Ended June 30,					
	2020		2019		Change	
	Amount	% of Total Revenue	Amount	% of Total Revenue	Amount	%
	(Dollars in thousands)					
Revenue:						
Product, subscription and support	$ 177,305	77%	$ 174,102	80%	$ 3,203	2 %
Professional services	52,595	23	43,506	20	9,089	21
Total revenue	$ 229,900	100%	$ 217,608	100%	$ 12,292	6 %
Product, subscription and support by type:						
Product and related subscription and support	$ 103,804	45%	$ 117,490	54%	$ (13,686)	(12)%
Platform, cloud subscription and managed services	73,501	32	56,612	26	16,889	30
Total product, subscription and support	$ 177,305	77%	$ 174,102	80%	$ 3,203	2 %
Revenue by geographic region:						
U.S.	$ 145,225	63%	$ 134,968	62%	$ 10,257	8 %
EMEA	38,180	17	39,788	18	(1,608)	(4)
APAC	32,950	14	31,790	15	1,160	4
Other	13,545	6	11,062	5	2,483	22
Total revenue	$ 229,900	100%	$ 217,608	100%	$ 12,292	6 %

Product, subscription and support revenue increased by $3.2 million, or 2%, during the three months ended June 30, 2020 compared to the three months ended June 30, 2019. The increase was comprised of an increase in platform, cloud subscription and managed services revenue of $16.9 million, which was offset by a decrease in product and related subscription and support revenue of $13.7 million. The increase in platform, cloud subscription and managed services reflected increased recognition of deferred revenue associated with sales of our threat intelligence subscriptions, our cloud-based email and endpoint security, our validation platform solutions, our Helix platform, and our Managed Defense managed security service. The decrease in product and related subscription and support revenue was primarily due to a decrease in the Product and related subscription and support deferred revenue, from which revenue is recognized. The decrease in deferred revenue reflected a decrease in sales of our on-premise solutions as customers migrate to cloud-based solutions.

Professional services revenue increased by $9.1 million, or 21%, during the three months ended June 30, 2020 compared to the three months ended June 30, 2019. The increase was primarily driven by an increase in number of engagements enabled by an increase in engagements and professional services personnel as compared to the same period in 2019.

Our international revenue increased $2.0 million, or 2%, during the three months ended June 30, 2020 compared to the three months ended June 30, 2019. The increase reflects growth in sales from certain international regions compared to prior periods as a result of an increase in revenue recognized from a build-up of deferred revenue from prior periods.

Cost of Revenue and Gross Margin

	Three Months Ended June 30,					
	2020		2019		Change	
	Amount	Gross Margin	Amount	Gross Margin	Amount	%
	(Dollars in thousands)					
Cost of revenue:						
Product, subscription and support	$ 54,026		$ 53,198		$ 828	2%
Professional services	26,967		24,195		2,772	11
Total cost of revenue	$ 80,993		$ 77,393		$ 3,600	5%
Gross margin:						
Product, subscription and support		70%		69%		
Professional services		49%		44%		
Total gross margin		65%		64%		

The cost of product, subscription and support revenue increased by $0.8 million, or 2%, during the three months ended June 30, 2020 compared to the three months ended June 30, 2019. The increase in cost of product, subscription and support revenue was primarily the result of higher revenue, and increased third-party cloud hosting costs associated with our accelerated migration to a cloud-based solution. This was partially offset by a decrease in cost of product and related subscription and support revenue as we continue to transition from on-premise products to cloud-based solutions and a decrease of $0.6 million in travel and entertainment costs which we attribute to the COVID-19 pandemic.

The cost of professional services revenue increased by $2.8 million, or 11%, during the three months ended June 30, 2020 compared to the three months ended June 30, 2019. The increase in cost of professional services revenue was primarily due to a $4.4 million increase in personnel costs due to increased headcount assigned to projects, and a $0.8 million increase in stock-based compensation partially offset by $2.4 million decrease in travel and entertainment costs which we attribute to the COVID-19 pandemic.

Gross margin percentage increased by 1% during the three months ended June 30, 2020 compared to the three months ended June 30, 2019. The increase in gross margin percentage was primarily due to an increase in gross margin percentage from professional services and a decrease of $3.0 million in travel and entertainment costs attributed to the COVID-19 pandemic. This was partially offset by an increase in third-party hosting fees in our cost of product, subscription and support revenues as we have transitioned some of our cloud-based solutions from production data centers to third-party cloud hosting. We expect to continue this transition throughout the remainder of 2020 and potentially beyond.

Operating Expenses

	Three Months Ended June 30,					
	2020		2019		Change	
	Amount	% of Total Revenue	Amount	% of Total Revenue	Amount	%
	(Dollars in thousands)					
Operating expenses:						
Research and development	$ 60,596	26%	$ 67,538	31%	$ (6,942)	(10)%
Sales and marketing	90,042	39	101,494	47	(11,452)	(11)
General and administrative	25,281	11	27,926	13	(2,645)	(9)
Restructuring charges	12,558	5	—	—	12,558	
Total operating expenses	$ 188,477	82%	$ 196,958	91%	$ (8,481)	(4)%
Includes stock-based compensation expense of:						
Research and development	$ 9,861		$ 11,889			
Sales and marketing	11,410		13,227			
General and administrative	6,981		7,430			
Restructuring charges	293		—			
Total	$ 28,545		$ 32,546			

Research and Development

Research and development expense decreased by $6.9 million, or 10%, during the three months ended June 30, 2020 compared to the three months ended June 30, 2019. The decrease was primarily due to a decrease of $2.1 million in payroll costs driven by lower headcount as a result of the restructuring plan implemented in the second quarter of 2020, a decrease of $2 million in stock-based compensation expense, a decrease of $0.9 million in travel and entertainment expense which we attribute to the COVID-19 pandemic, a decrease of $0.9 million in consulting, employee acquisition costs and professional services costs, a decrease of $0.3 million in telecommunication and software related costs and a decrease of approximately $0.8 million in other operating expenses.

Sales and Marketing

Sales and marketing expense decreased by $11.5 million, or 11%, during the three months ended June 30, 2020 compared to the three months ended June 30, 2019. The decrease was primarily due to a decrease of $5.0 million in payroll related costs driven by lower headcount as a result of restructuring plan implemented in the second quarter of 2020, a decrease of $4.4 million in travel and entertainment expense which we attribute to the COVID-19 pandemic, and a decrease of $2.0 million in marketing program costs. These decreases were offset by an increase of $1.4 million in commissions expense.

General and Administrative

General and administrative expense decreased by $2.6 million, or 9%, during the three months ended June 30, 2020 compared to the three months ended June 30, 2019. The decrease was primarily due to a decrease of $0.7 million in legal costs attributed primarily to the integration of the Verodin acquisition in 2019, a decrease of $0.6 million in travel and entertainment expense which we attribute to the COVID-19 pandemic, a decrease of $0.5 million in payroll related costs driven by lower headcount as a result of restructuring plan implemented in the second quarter of 2020, a decrease of $0.4 million in stock-based compensation expense and a decrease of approximately $0.4 million in other operating expenses.

Restructuring Charges

During the three months ended June 30, 2020, we incurred restructuring charges of approximately $12.6 million, which primarily related to employee severance charges and other termination benefits as well as certain facilities exit costs under our April 2020 restructuring plan.

Interest Income

	Three Months Ended June 30,		Change	
	2020	2019	Amount	%
	(Dollars in thousands)			
Interest income	$ 2,863	$ 6,137	$ (3,274)	(53)%

Interest income decreased for the three months ended June 30, 2020 compared to the three months ended June 30, 2019, due primarily to a lower rate of return on balances in our cash and cash equivalents and investments.

Interest Expense

	Three Months Ended June 30,		Change	
	2020	2019	Amount	%
	(Dollars in thousands)			
Interest expense	$ (15,356)	$ (15,407)	$ 51	— %

Interest expense decreased slightly for the three months ended June 30, 2020 compared to the three months ended June 30, 2019. Interest expense pertains primarily to the amortization of discount and issuance costs related to our convertible notes.

Other Expense, Net

	Three Months Ended June 30,		Change	
	2020	2019	Amount	%
	(Dollars in thousands)			
Other expense, net	$ (119)	$ (770)	$ 651	(85)%

Other expense, net, decreased for the three months ended June 30, 2020 compared to the three months ended June 30, 2019 primarily due to lower foreign currency transaction losses, as well as the recognition of loss on investment in a privately held company in three months ended June 30, 2019.

Provision for Income Taxes

	Three Months Ended June 30,	
	2020	2019
	(Dollars in thousands)	
Provision for income taxes	$ 1,094	$ 540
Effective tax rate	(2.1)%	(0.8)%

The provision for income taxes increased for the three months ended June 30, 2020 compared to the three months ended June 30, 2019. The increase in the provision for income taxes was primarily due to tax benefit from the Verodin acquisition included in the three months ended June 30, 2019 but was not in the three months ended June 30, 2020.

Comparison of the Six Months Ended June 30, 2020 and 2019

Revenue

	Six Months Ended June 30, 2020					
	2020		2019		Change	
	Amount	% of Total Revenue	Amount	% of Total Revenue	Amount	%
	(Dollars in thousands)					
Revenue:						
Product, subscription and support	$ 351,388	77%	$ 344,005	80%	$ 7,383	2 %
Professional services	103,234	23	84,147	20	19,087	23
Total revenue	$ 454,622	100%	$ 428,152	100%	$ 26,470	6 %
Product, subscription and support by type:						
Product and related subscription and support	$ 209,492	46%	$ 235,938	55%	$ (26,446)	(11)%
Platform, cloud subscription and managed services	141,896	31	108,067	25	33,829	31
Total product, subscription and support	$ 351,388	77%	$ 344,005	80%	$ 7,383	2 %
Revenue by geographic region:						
United States	$ 285,799	62%	$ 266,266	62%	$ 19,533	7 %
EMEA	76,242	17	75,722	18	520	1
APAC	66,523	15	63,361	15	3,162	5
Other	26,058	6	22,803	5	3,255	14
Total revenue	$ 454,622	100%	$ 428,152	100%	$ 26,470	6 %

Product, subscription and support revenue increased by $7.4 million, or 2%, during the six months ended June 30, 2020 compared to the six months ended June 30, 2019. The increase in product, subscription and support revenue consisted of an increase of $33.8 million in platform, cloud subscription and managed services revenue, offset by a decrease of $26.4 million in product and related subscription and support revenue. The increase in platform, cloud subscriptions and managed services was primarily due to an increase in revenue recognized from deferred revenue related to growth of sales of our threat intelligence, our validation platform, our cloud-based email and endpoint security solutions, our Helix platform, and our Managed Defense managed security service. The decrease in product and related subscription and support revenue was primarily due to a decrease deferred revenue for product and related subscription and support, from which revenue is recognized. The decrease in deferred revenue reflected a decrease in sales of our on-premise solutions as customers migrate to cloud-based solutions.

Professional services revenue increased by $19.1 million, or 23%, during the six months ended June 30, 2020 compared to the six months ended June 30, 2019. The increase was primarily due to revenues from incident response services and other strategic consulting services and an increase in billable hours due to more engagements and professional services personnel as compared to the same period in 2019.

Our international revenue increased $6.9 million, or 4%, during the six months ended June 30, 2020 compared to the six months ended June 30, 2019, driven by increases in international professional services revenue and the related product and subscription pull through from those service engagements.

Cost of Revenue and Gross Margin

	Six Months Ended June 30,					
	2020		2019		Change	
	Amount	Gross Margin	Amount	Gross Margin	Amount	%
	(Dollars in thousands)					
Cost of revenue:						
Product, subscription and support	$ 107,162		$ 101,666		$ 5,496	5%
Professional services	55,417		47,295		8,122	17
Total cost of revenue	$ 162,579		$ 148,961		$ 13,618	9%
Gross margin:						
Product, subscription and support		70%		70%		
Professional services		46%		44%		
Total gross margin		64%		65%		

The cost of product, subscription and support revenue increased by $5.5 million, or 5%, during the six months ended June 30, 2020 compared to the six months ended June 30, 2019. The increase in cost of revenues was primarily due to an increase of approximately $8.2 million in third-party hosting costs associated with higher sales of our cloud-based products, and an increase of $6.0 million in personnel related costs. The increase was offset in part by a decrease of $2.2 million in intangibles amortization, $2.1 million in depreciation, $1.2 million in direct hardware costs, $0.6 million in travel and entertainment costs as well as various immaterial decreases in expense including volume driven costs and telecommunication costs totaling $0.9 million as compared to the same period in 2019.

The cost of professional services revenue increased $8.1 million, or 17%, during the six months ended June 30, 2020 compared to the six months ended June 30, 2019. The increase in cost of professional services revenue was primarily due to an increase of $9.0 million in personnel related expenses due to an increase in headcount as compared to the same period in 2019, and an increase of $1.0 million in stock based compensation offset by a decrease of $2.4 million in travel and entertainment costs which we attribute to the COVID-19 pandemic.

Gross profit margin decreased 1% as a percentage of revenue during the six months ended June 30, 2020 compared to the six months ended June 30, 2019. Product, subscription and support gross profit margin remained flat compared to the same period in 2019. Professional services gross margin increased 2% primarily due to an increase in billable hours as compared to the same period in 2019 and a decrease in travel and entertainment costs attributed to the COVID-19 pandemic.

Operating Expenses

	Six Months Ended June 30,					
	2020		2019		Change	
	Amount	% of Total Revenue	Amount	% of Total Revenue	Amount	%
	(Dollars in thousands)					
Operating expenses:						
Research and development	$ 128,099	28%	$ 134,933	32%	$ (6,834)	(5)%
Sales and marketing	190,242	42	205,390	48	(15,148)	(7)
General and administrative	52,710	12	55,302	13	(2,592)	(5)
Restructuring charges	23,532	5	3,799	—	19,733	519
Total operating expenses	$ 394,583	87%	$ 399,424	93%	$ (4,841)	(1)%
Includes stock-based compensation expense of:						
Research and development	$ 21,406		$ 24,313			
Sales and marketing	22,896		25,767			
General and administrative	12,486		15,133			
Restructuring charges	293					
Total	$ 57,081		$ 65,213			

Research and Development

Research and development expense decreased $6.8 million, or 5%, during the six months ended June 30, 2020 compared to the six months ended June 30, 2019. The decrease was due primarily to a $2.9 million decrease in stock based compensation, a $1.2 million decrease in travel and entertainment costs which we attribute to the COVID-19 pandemic, a $1.1 million decrease in payroll related costs driven by lower headcount as a result of the restructuring plans implemented in the first and second quarters of 2020, a $0.6 million decrease in consulting and employee acquisition related costs, a $0.5 million decrease in telecommunication and software costs and a decrease of approximately $0.5 million in other operating costs.

Sales and Marketing

Sales and marketing expense decreased $15.1 million, or 7%, during the six months ended June 30, 2020 as compared to the six months ended June 30, 2019. The decrease was primarily due to an $8.9 million decrease in payroll related costs driven by lower headcount as a result of the restructuring plans implemented in the first and second quarters of 2020, a decrease of $8.4 million in travel and entertainment costs which we attribute to the COVID-19 pandemic and a decrease of $2.8 million in costs of marketing programs. These decreases were primarily offset by an increase of $4.1 million in commissions, an increase of $0.6 million in amortization of intangibles, an increase of $0.4 million in third party hosting and other software costs, an increase of $0.2 million in professional services costs and a decrease of $0.8 million in other operating expenses as compared to the same period in 2018.

General and Administrative

General and administrative expense decreased by $2.6 million, or 5%, during the six months ended June 30, 2020 compared to the six months ended June 30, 2019. The decrease was primarily due to a decrease of $2.6 million in stock bases compensation, a decrease of $0.6 million in travel and entertainment costs which we attribute to the COVID-19 pandemic, a decrease of $0.6 million in legal costs attributed primarily to the integration of the Verodin acquisition in 2019, a decrease of $0.2 million in marketing programs related costs. These decreases were primarily offset by a $0.7 million increase in consulting and professional services costs and an increase of $1 million in other operating expenses which includes $0.7 million related to bad debt expense attributed to COVID-19.

Restructuring Charges

During the six months ended June 30, 2020, we incurred restructuring charges of approximately $23.5 million, which primarily related to employee severance charges and other termination benefits as well as certain facilities exit costs under our January 2020 and April 2020 restructuring plans. We incurred no restructuring charges during the six months ended June 30, 2019.

Interest Income

	Six Months Ended June 30,		Change	
	2020	2019	Amount	%
	(Dollars in thousands)			
Interest income	$ 7,287	$ 11,985	$ (4,698)	(39)%

Interest income decreased for the six months ended June 30, 2020 compared to the six months ended June 30, 2019, due to a lower rate of return on balances in our cash and cash equivalents and investments.

Interest Expense

	Six Months Ended June 30,		Change	
	2020	2019	Amount	%
	(Dollars in thousands)			
Interest expense	$ (31,202)	$ (30,670)	$ (532)	2%

Interest expense increased for the six months ended June 30, 2020 compared to the six months ended June 30, 2019. Interest expense pertains primarily to cash interest expense and the amortization of discount and issuance costs related to our convertible notes.

Other Expense, Net

	Six Months Ended June 30,		Change	
	2020	2019	Amount	%
	(Dollars in thousands)			
Other expense, net	$ (1,108)	$ (1,058)	$ (50)	5%

Other expense, net, for the six months ended June 30, 2020 decreased slightly primarily due to foreign currency transaction losses as well as recognition of a loss on investment in a privately held company compared to the six months ended June 30, 2019.

Provision for Income Taxes

	Six Months Ended June 30,	
	2020	2019
	(Dollars in thousands)	
Provision for income taxes	$ 2,019	$ 2,722
Effective tax rate	(1.6)%	(1.9)%

The provision for income taxes decreased for the six months ended June 30, 2020 compared to the six months ended June 30, 2019. The decrease in the provision for income taxes for the six months ended June 30, 2020 was primarily due to lower foreign taxes as compared to the six months ended June 30, 2019.

Liquidity and Capital Resources

	As of June 30, 2020	As of December 31, 2019
	(In thousands)	
Cash and cash equivalents	$ 404,346	$ 334,603
Short-term investments	$ 509,858	$ 704,955

	Six Months Ended June 30,	
	2020	2019
	(In thousands)	
Cash provided by (used in) operating activities	$ (9,766)	$ 9,524
Cash provided by (used in) investing activities	167,909	(101,262)
Cash provided by (used in) financing activities	(88,400)	13,810
Net increase (decrease) in cash and cash equivalents	$ 69,743	$ (77,928)

As of June 30, 2020, our cash and cash equivalents of $404.3 million were held for working capital, capital expenditures, investment in technology, debt servicing and business acquisition purposes, of which approximately $70.3 million was held outside of the United States. We consider the undistributed earnings of our foreign subsidiaries as of June 30, 2020 to be indefinitely reinvested outside the United States on the basis of estimates that future domestic cash generation will be sufficient to meet future domestic cash needs and our plan for reinvestment of our foreign subsidiaries' undistributed earnings.

On January 17, 2020, we acquired Cloudvisory LLC ("Cloudvisory"), a provider of cloud visibility and control solutions. Total consideration for the acquisition was $13.2 million in cash. We also assumed $0.3 million in net tangible liabilities.

On May 28, 2019, we acquired Verodin, a security instrumentation platform company. As consideration for the acquisition, we paid cash consideration of $143.7 million, issued 8,404,609 shares of our common stock with an estimated fair value of $119.7 million and recognized $1.5 million of the fair value of assumed stock options attributable to pre-combination services.

Our principal sources of liquidity are existing cash and cash equivalents and short-term investments and any cash inflow from operations, which we believe will be sufficient to meet our anticipated cash needs for at least the next 12 months. While we have experienced delays in collections which we attribute to the COVID-19 pandemic, we believe we will be able to manage liquidity to meet our anticipated cash needs for at least the next 12 months. Our future capital requirements will depend on many factors, including our growth rate, the timing and extent of spending to support development efforts, the efficiency of our marketing and sales activities, the introduction of new and enhanced product and service offerings, the cost of any future acquisitions of technology or businesses, and the continuing market acceptance of our products. In the event that additional financing is required from outside sources, we may not be able to raise such financing on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, operating results and financial condition would be adversely affected.

Operating Activities

During the six months ended June 30, 2020, our operating activities used cash of $9.8 million. We incurred a net loss of $129.6 million, which included net non-cash expenses of $152.1 million, primarily consisting of stock-based compensation charges, depreciation and amortization expense and non-cash interest expense related to our convertible notes. Our net change in operating assets and liabilities used cash of $32.3 million, primarily related to cash sourced from a reduction in accounts receivable of $50.3 million due to increased collections, a decrease in prepaid expenses and other current assets of $13.1 million primarily due to receipt of other receivables, increase in accrued compensation of $11.9 million offset by a decrease in deferred revenue of $81.7 million, decrease in accounts payable of $13.0 million, a decrease in other long-term liabilities of $6.9 million and a decrease in accrued liabilities of $6.1 million.

During the six months ended June 30, 2019, our operating activities provided cash of $9.5 million. We incurred a net loss of $142.7 million, which included net non-cash expenses of $152.9 million, primarily consisting of stock-based compensation charges, depreciation and amortization expense and non-cash interest expense related to our convertible notes. Our net change in operating assets and liabilities used cash of $0.7 million, primarily related to cash sourced from a reduction in accounts receivable of $32.9 million due to increased collections, a decrease in prepaid expenses and other current assets of $4.0 million primarily due to amortization of commissions and receipt of other receivables and an increase in accounts payable of $4.4 million, which was partially offset by reductions in deferred revenue of $24.8 million and a decrease in accrued compensation of $8.7 million due to decrease in commission expense.

Investing Activities

Cash provided by investing activities during the six months ended June 30, 2020 was $167.9 million. This was primarily due to $171.1 million provided by net maturities of short-term investments, $28.2 million provided by sale of short term investments, offset by $12.6 million used to acquire Cloudvisory, net of cash acquired, and $17.6 million used for capital expenditures to purchase property and equipment and demonstration units, and $1.0 million used for the purchase of an investment in a privately held company.

Cash used in investing activities during the six months ended June 30, 2019 was $101.3 million. This was primarily due to $127.2 million used to acquire Verodin, net of cash acquired, and $28.2 million used for capital expenditures to purchase property and equipment and demonstration units, partially offset by $53.8 million provided by net maturities of short-term investments.

Financing Activities

During the six months ended June 30, 2020, financing activities used $88.4 million in cash, primarily for payment of $96.4 million related to the repurchase of Series A Notes, payment related to shares withheld for taxes of $8.0 million offset by $12.3 million received from employee purchases of shares under our 2013 Employee Stock Purchase Plan ("ESPP") and $3.7 million received from exercises of employee stock options.

During the six months ended June 30, 2019, financing activities provided $13.8 million in cash, primarily from employee purchases of shares under the ESPP and exercises of employee stock options.

Contractual Obligations and Commitments

There have been no significant changes to our contractual obligations and commitments discussed in our Annual Report on Form 10-K for the year ended December 31, 2019 except for those disclosed in Note 9 Convertible Senior Notes and Note 10 Commitments and Contingencies contained in the "Notes to Condensed Consolidated Financial Statements" in Part I, Item I of this Quarterly Report on Form 10-Q.

Off-Balance Sheet Arrangements

As of June 30, 2020, we did not have any relationships with unconsolidated entities or financial partnerships, such as structured finance or special purpose entities, which were established for the purpose of facilitating off-balance sheet arrangements or other purposes.

Use of Estimates

Our condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses, and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Actual results may differ from these estimates. To the extent that there are material differences between these estimates and our actual results, our future financial statements will be affected.

Summary of Significant Accounting Policies

There have been no significant changes to our significant accounting policies as of and for the three and six months ended June 30, 2020, as compared to the significant accounting policies described in our Annual Report on Form 10-K for the year ended December 31, 2019.

Recent Accounting Pronouncements

See Note 1 Description of Business and Summary of Significant Accounting Policies contained in the "Notes to Condensed Consolidated Financial Statements" in Part I, Item I of this Quarterly Report on Form 10-Q for a full description of the recent accounting pronouncements and our expectation of their impact, if any, on our results of operations and financial conditions.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Foreign Currency Exchange Risk

Our sales contracts are primarily denominated in U.S. dollars. A portion of our operating expenses are incurred outside the United States and are denominated in foreign currencies and are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the Indian Rupee, British Pound Sterling, Japanese Yen and Euro. Additionally, fluctuations in foreign currency exchange rates may cause us to recognize transaction gains and losses in our statement of operations. On June 23, 2016, the United Kingdom ("U.K.") held a referendum in which British voters approved an exit from the European Union ("EU"), commonly referred to as "Brexit." This resulted in an adverse impact to currency exchange rates, notably the British Pound Sterling which experienced a sharp decline in value compared to the U.S. dollar and other currencies. Continued volatility in currency exchange rates is expected as the U.K. negotiates its exit from the EU, which could result in greater transaction gains or losses in our statement of operations.

The effect of a hypothetical 10% adverse change in foreign exchange rates on monetary assets and liabilities at June 30, 2020 would not be material to our financial condition or results of operations. To date, foreign currency transaction gains and losses and exchange rate fluctuations have not been material to our financial statements, and we have not engaged in any foreign currency hedging transactions.

As our international operations continue to grow, our risks associated with fluctuations in currency rates will become greater, and we will continue to reassess our approach to managing this risk. In addition, currency fluctuations or a weakening U.S. dollar can increase the costs of our international expansion, and a strengthening U.S. dollar could slow international demand as products and services priced in U.S. dollars become more expensive.

Interest Rate Risk

We had cash and cash equivalents and investments of $914.2 million and $1,039.6 million as of June 30, 2020 and December 31, 2019, respectively, consisting of bank deposits, money market funds, certificates of deposit, commercial paper and bonds issued by corporate institutions, the U.S. Treasury and U.S. government agencies. Such interest-earning instruments carry a degree of interest rate risk, but the risk is limited due to our investment policies which limit the duration of our short-term investments. To date, fluctuations in interest income have not been significant.

We do not enter into investments for trading or speculative purposes and have not used any derivative financial instruments to manage our interest rate risk exposure. We have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in interest rates.

Our cash flow exposure due to changes in interest rates related to our debt is limited as the Series A Notes, Series B Notes and 2024 Notes have fixed interest rates of 1.000%, 1.625% and 0.875%, respectively. The fair value of the Convertible Notes may increase or decrease for various reasons, including fluctuations in the market price of our common stock, fluctuations in market interest rates and fluctuations in general economic conditions. Based upon the quoted market price as of June 30, 2020, the fair value of our convertible notes was approximately $1.0 billion.

A hypothetical 10% change in interest rates during any of the periods presented would not have had a material impact on our financial statements.

Item 4. Controls and Procedures

Limitations on Effectiveness of Controls

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable 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 its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2020. The term "disclosure controls and procedures," as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (or the “Exchange Act”), means controls and other procedures of a company 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 management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Based on our evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of June 30, 2020, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rules 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the quarter ended June 30, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings

The information set forth under the "Litigation" subheading in Note 10 Commitments and Contingencies contained in the "Notes to Condensed Consolidated Financial Statements" in Part I, Item I of this Quarterly Report on Form 10-Q is incorporated herein by reference.

Item 1A. Risk Factors

Our operations and financial results are subject to various risks and uncertainties including those described below. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, also may become important factors that affect us. Please see page 28 of this Quarterly Report on Form 10-Q for a discussion of forward-looking statements that are qualified by these risk factors. If any of the following risks or others not specified below materialize, our business, financial condition and results of operations could be materially adversely affected. In that case, the trading price of our common stock could decline.

Risks Related to Our Business and Our Industry

If the IT security market does not continue to adopt our security solutions, our sales will not grow as quickly as anticipated, or at all, and our business, results of operations and financial condition would be harmed.

Our future success depends on market adoption of our unique approach to IT security, which combines our technology, threat intelligence and security expertise in solutions that detect and prevent threats, measure security effectiveness, investigate and respond to breaches and enable customers to adapt to changes in the threat environment. We are seeking to disrupt the IT security market with our security solutions. Our solutions interoperate with, but do not replace, other IT security products. Enterprises and governments that use other security products, including signature-based and advanced products, for their IT security may be hesitant to purchase our security solutions if they believe their existing products provide a level of IT security that is sufficient to meet their needs. Currently, many enterprises and governments have not allocated a fixed portion of their budgets to separate advanced security products, standalone threat intelligence or solutions that evaluate security effectiveness. As a result, to expand our customer base, we need to convince potential customers to allocate a portion of their discretionary budgets to purchase our technology, threat intelligence and expertise. However, even if we are successful in doing so, any future deterioration in general economic conditions, including as a result of the COVID-19 pandemic, may cause our customers to cut their overall IT spending, and such cuts may fall disproportionately on solutions like ours. If we do not succeed in convincing customers that our solutions should be an integral part of their overall approach to IT security and that a fixed portion of their annual IT budgets should be allocated to our solutions, our sales will not grow as quickly as anticipated, or at all, which would have an adverse impact on our business, results of operations and financial condition.

Even if there is significant demand for security solutions like ours, if our competitors include functionality that is, or is perceived to be, better than or equivalent to that of our solutions, we may have difficulty increasing the market penetration of our solutions. Furthermore, even if the functionality offered by other IT security providers is different and more limited than the functionality of our solutions, organizations may elect to accept such limited functionality in lieu of adding solutions and services from additional vendors like us, especially if competitor offerings are free or available at a lower cost.

In addition, changes in customer requirements could reduce customer demand for our security solutions. For example, if customers were to reduce their number of web egress points or migrate their workloads to a cloud platform, they would not need to purchase as many of our network and email security appliances, which currently account for a significant portion of our revenue. Similarly, if one or more governments share, on a free or nearly free basis, threat intelligence with other governmental agencies or organizations, such as critical infrastructure companies, then those agencies or organizations might have less demand for additional threat intelligence and may purchase less of our standalone threat intelligence offerings.

If enterprises and governments do not continue to adopt our security solutions for any of the reasons discussed above or for other reasons not contemplated, our sales would not grow as quickly as anticipated, or at all, and our business, results of operations and financial condition would be harmed.

We have had operating losses each year since our inception, and may not achieve or maintain profitability in the future.

We have incurred operating losses each year since our inception, including net losses of $53.3 million and $67.3 million during the three months ended June 30, 2020 and 2019, respectively. Any failure to increase our revenue and manage our cost structure as we grow our business could prevent us from achieving or, if achieved, maintaining profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. If we are unable to become and remain profitable, the value of our company could decrease and our ability to raise capital, maintain our research and development efforts, and expand our business could be negatively impacted.

We face intense competition and could lose market share to our competitors, which could adversely affect our business, financial condition and results of operations.

The market for security products and services is intensely competitive and characterized by rapid changes in technology, customer requirements, industry standards, threat vectors and frequent new product introductions and improvements. We anticipate continued challenges from current competitors, which in many cases are more established and enjoy greater resources than us, as well as by new entrants into the industry. If we are unable to anticipate or effectively react to these competitive challenges, our competitive position could weaken, and we could experience a decline in our growth rate or revenue that could adversely affect our business and results of operations.

Our competitors and potential competitors include large networking vendors such as Cisco Systems and Juniper Networks that may emulate or integrate security features similar to ours into their own products; large companies such as IBM, Oracle and HPE that have acquired security solutions in recent years and have the technical and financial resources to bring competitive solutions to the market; independent security vendors such as Palo Alto Networks, Proofpoint and CrowdStrike that offer products or features that claim to perform similar functions to our platform; small and large companies, including new market entrants, that offer niche security solutions that compete with some of the features present in our solutions; providers of traditional signature-based security solutions, such as Symantec and McAfee; and other providers of incident response and compromise assessment services. Other IT providers offer, and may continue to introduce, security features that compete with our platform, either in stand-alone security products or as additional features in their network infrastructure products. Many of our existing competitors have, and some of our potential competitors could have, substantial competitive advantages such as:

- greater name recognition, longer operating histories and larger customer bases;
- larger sales and marketing budgets and resources;
- broader distribution and established relationships with channel and distribution partners and customers;
- greater customer support resources;
- greater resources to make acquisitions or enter into strategic partnerships;
- lower labor and research and development costs;
- larger and more mature intellectual property portfolios; and
- substantially greater financial, technical and other resources.

In addition, some of our larger competitors have substantially broader product offerings and may be able to leverage their relationships with distribution partners and customers based on other products or incorporate functionality into existing products to gain business in a manner that discourages users from purchasing our products, subscriptions and services, including by selling at zero or negative margins, product bundling or offering closed technology platforms. Potential customers may also prefer to purchase from their existing suppliers rather than a new supplier regardless of product performance or features. As a result, even if the features of our platform are superior, customers may not purchase our products. In addition, new innovative start-up companies, and larger companies that are making significant investments in research and development, may invent similar or superior products and technologies that compete with our platform. Our current and potential competitors may also establish cooperative relationships among themselves or with third parties that may further enhance their resources. Further, as our customers refresh the security products bought in prior years, they may seek to consolidate vendors, which may result in current customers choosing to purchase products from our competitors on an ongoing basis.

Some of our competitors have made or could make acquisitions of businesses that allow them to offer more competitive and comprehensive solutions. As a result of such acquisitions, our current or potential competitors may accelerate the adoption of new technologies that better address end-customer needs, devote greater resources to bring these products and services to market, initiate or withstand substantial price competition, or develop and expand their product and service offerings more quickly than we do. These competitive pressures in our market or our failure to compete effectively may result in price reductions, fewer orders, reduced revenue and gross margins, and loss of market share.

If we are unable to compete successfully, or if competing successfully requires us to take costly actions in response to the actions of our competitors, our business, financial condition and results of operations could be adversely affected.

The global COVID-19 pandemic could harm our business and results of operations.

In December 2019, COVID-19 was reported in China, in January 2020 the World Health Organization ("WHO") declared it a Public Health Emergency of International Concern, and in March 2020 the WHO declared it a pandemic. This contagious disease outbreak has continued to spread across the globe and is impacting worldwide economic activity and financial markets. In light of the uncertain and rapidly evolving situation relating to the spread of COVID-19, we have taken precautionary measures intended to minimize the risk of the virus to our employees, our customers, and the communities in which we operate, which could negatively impact our business. Although we continue to monitor the situation and may adjust our current policies as more information and public health guidance become available, precautionary measures that have been adopted could negatively affect our customer success efforts, sales and marketing efforts, delay and lengthen our sales cycles, or create operational or other challenges, any of which could harm our business and results of operations. In addition, the COVID-19 pandemic may disrupt the operations of our customers and partners for an indefinite period of time, including as a result of travel restrictions and/or business shutdowns, all of which could negatively impact our business and results of operations, including cash flows. More generally, the COVID-19 pandemic could adversely affect economies and financial markets globally, potentially leading to an economic downturn, which could decrease technology spending and adversely affect demand for our offerings and harm our business and results of operations. It is not possible at this time to estimate the impact that the COVID-19 pandemic could have on our business, as the impact will depend on future developments, which are highly uncertain and cannot be predicted.

Real or perceived defects, errors or vulnerabilities in our products or services, the misconfiguration of our products, the failure of our products or services to block malware or prevent a security breach, or the failure of customers to take action on attacks identified by our products could harm our reputation and adversely impact our business, financial position and results of operations.

Because our products and services are complex, they have contained and may contain design or manufacturing defects or errors that are not detected until after their deployment. Our products also provide our customers with the ability to customize a multitude of settings, and it is possible that a customer could misconfigure our products or otherwise fail to configure our products in an optimal manner. Such defects and misconfigurations of our products could cause our products or services to be vulnerable to security attacks, cause them to fail to secure networks and detect and block threats, or temporarily interrupt the networking traffic of our customers. In addition, because the techniques used by computer hackers to access or sabotage networks change frequently and generally are not recognized until launched against a target, there is a risk that an advanced attack could emerge that our products and services are unable to detect or prevent. Moreover, as our products and services are adopted by an increasing number of enterprises and governments, it is possible that the individuals and organizations behind advanced malware attacks will focus on finding ways to defeat our products and services. If this happens, our networks, products, services and subscriptions could be targeted by attacks specifically designed to disrupt our business and undermine the perception that our products and services are capable of providing superior IT security, which, in turn, could have a serious impact on our reputation as a provider of security solutions. In addition, defects or errors in our subscription updates or our products could result in a failure of our subscriptions to effectively update customers’ hardware and cloud-based products. Our data centers and networks may experience technical failures and downtime, may fail to distribute appropriate updates, or may fail to meet the increased requirements of a growing installed customer base, any of which could temporarily or permanently expose our customers’ networks, leaving their networks unprotected against the latest security threats. Moreover, our products must interoperate with our customers’ existing infrastructure, which often have different specifications, utilize multiple protocol standards, deploy products from multiple vendors, and contain multiple generations of products that have been added over time. As a result, unanticipated failures could occur if a customer deploys our products in an untested configuration. Similarly, if we inadvertently update our products with an erroneous configuration or untested detection content, invalid detections or product downtime could occur. Any of these situations could result in negative publicity to us, damage to our reputation, declining sales, increased expenses and customer relations issues, and therefore adversely impact our business, financial position and results of operations.

If any of our customers becomes infected with malware after using our products or services, such customer could be disappointed with our products and services, regardless of whether our products or services blocked the theft of any of such customer’s data or would have blocked such theft if configured properly. Similarly, if our products detect attacks against a customer but the customer has not permitted our products to block the theft of customer data, customers and the public may erroneously believe that our products were not effective. For any security breaches against customers that use our services, such as customers that have hired us to monitor their networks and endpoints through our own or our co-branded security operation centers, breaches against those customers may result in customers and the public believing that our products and services failed. Furthermore, if any enterprises or governments that are publicly known to use our products or services are the subject of an advanced cyber attack that becomes publicized, our other current or potential customers may look to our competitors for alternatives to our products and services. Real or perceived security breaches of our customers’ networks could cause disruption or damage to their networks or other negative consequences and could result in negative publicity to us, damage to our reputation, declining sales, increased expenses and customer relations issues.

Furthermore, our products and services may fail to detect or prevent malware, ransomware, viruses, worms or similar threats for any number of reasons, including our failure to enhance and expand our products and services to reflect industry trends, new technologies and new operating environments, the complexity of the environment of our clients and the sophistication of malware, viruses and other threats. In addition, from time to time, firms test our products against other security products. Our products may fail to detect or prevent threats in any particular test for a number of reasons, including misconfiguration. To the extent potential customers, industry analysts or testing firms believe that the occurrence of a failure to detect or prevent any particular threat is a flaw or indicates that our products or services do not provide significant value, our reputation and business could be harmed. Failure to keep pace with technological changes in the IT security industry and changes in the threat landscape could adversely affect our ability to protect against security breaches and could cause us to lose customers. In addition, in the event that a customer suffers a cyber attack, we could be subject to claims based on a misunderstanding of the scope of our contractual warranties or the protection afforded by the Support Anti-Terrorism by Fostering Effective Technologies Act of 2002.

In addition, we cannot assure you that any limitation of liability provisions in our customer agreements, contracts with third-party vendors and service providers or other contracts would be enforceable or adequate or would otherwise protect us from any liabilities or damages with respect to any particular claim relating to a security breach or other security-related matter. While our insurance policies include liability coverage for certain of these matters, if we experienced a widespread security breach or other incident that impacted a significant number of our customers to whom we owe indemnity obligations, we could be subject to indemnity claims or other damages that exceed our insurance coverage. We also cannot be certain that our insurance coverage will be adequate for data handling or data security liabilities actually incurred, that insurance will continue to be available to us on economically reasonable terms, or at all, or that any future claim will not be excluded or otherwise be denied coverage by any insurer. The successful assertion of one or more large claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could have a material adverse effect on our business, including our financial condition, operating results and reputation.

Any real or perceived defects, errors or vulnerabilities in our products and services, or any other failure of our products and services to detect an advanced threat, could result in:

- a loss of existing or potential customers or channel partners;
- delayed or lost revenue and harm to our financial condition and results of operations;
- a delay in attaining, or the failure to attain, market acceptance;
- the expenditure of significant financial and product development resources in efforts to analyze, correct, eliminate, or work around errors or defects, to address and eliminate vulnerabilities, or to identify and ramp up production with alternative third-party manufacturers;
- an increase in warranty and other claims, or an increase in the cost of servicing warranty and other claims, either of which would adversely affect our gross margins;
- harm to our reputation or brand; and
- claims and litigation, regulatory inquiries, or investigations, enforcement actions, and other claims and liabilities, all of which may be costly and burdensome and further harm our reputation.

A network or data security incident against us, whether actual, alleged or perceived, may harm our reputation, create liability and adversely impact our financial results.

Increasingly, companies are subject to a wide variety of attacks on their networks on an ongoing basis. In addition to traditional computer “hackers,” malicious code (such as viruses and worms), phishing attempts, employee theft or misuse, and denial of service attacks, sophisticated nation-state and nation-state supported actors engage in intrusions and attacks (including advanced persistent threat intrusions) and add to the risks to our internal networks, cloud deployed enterprise and customer facing environments and the information they store and process. We and/or our third-party service providers may face security threats and attacks from a variety of sources. Our data, corporate systems, third-party systems and security measures may be breached due to the actions of outside parties, employee error, malfeasance, a combination of these, or otherwise, including social engineering and employee and contractor error or malfeasance, and, as a result, an unauthorized party may obtain access to our systems, networks, or data. We may face difficulties or delays in identifying or otherwise responding to any attacks or actual or potential breaches of security. Furthermore, as a well-known provider of security solutions, we may be a more attractive target for such attacks. The COVID-19 pandemic also is increasing the attack surface available to criminals, as more companies and individuals work online, and as such, the risk of a cybersecurity incident potentially occurring, and our investment in risk mitigations against such an incident, are increasing. We cannot provide assurances that our preventative efforts will be successful. A breach in our data security or an attack against our service availability, or that of our third-party service providers, could impact our networks or networks secured by our products and subscriptions, creating system disruptions or slowdowns and exploiting security vulnerabilities of our products, and the information stored on our networks or those of our third-party service providers could be accessed, publicly disclosed, altered, lost, or stolen, which could result in a loss of intellectual property or loss of data and subject us to liability and cause us financial harm.

Any actual, alleged or perceived breach of network security in our systems or networks, or any other actual, alleged or perceived data security incident we or our third-party service providers suffer, could result in damage to our reputation, negative publicity, loss of channel partners, customers and sales, loss of competitive advantages over our competitors, increased costs to remedy any problems and otherwise respond to any incident, regulatory investigations and enforcement actions, costly litigation, and other liability. In addition, we may incur significant costs and operational consequences of investigating, remediating, eliminating and putting in place additional tools and devices designed to prevent actual or perceived security breaches and other security incidents, as well as the costs to comply with any notification obligations resulting from any security incidents. Any of these negative outcomes could adversely impact the market perception of our products and subscriptions and end-customer and investor confidence in our company and could seriously harm our business or operating results.

Our results of operations may vary significantly from period to period, which could cause the trading price of our common stock to decline.

Our results of operations have varied significantly from period to period, and we expect that our results of operations, including, but not limited to our GAAP and non-GAAP measures, will continue to vary as a result of a number of factors, many of which are outside of our control and may be difficult to predict, including:

- our ability to attract new and retain existing customers or sell additional solutions to our existing customers;
- our ability to offset decreases in appliance sales (and attached support) with increases in software, subscription and services sales;
- potential adverse impacts from our re-allocation of resources from our mature appliance-based products to our cloud security and platform solutions;
- changes in our mix of products, subscriptions and services sold, including changes in the average contract length for subscriptions and support;
- the timing and success of new platform, subscription or service introductions by us or our competitors;
- real or perceived reductions in the efficacy of our solutions by our customers or in the marketplace;
- budgeting cycles, seasonal buying patterns and purchasing practices of customers;
- the timing of new contracts or shipments of our products and length of our sales cycles;
- changes in customer, distributor or reseller requirements or market needs;
- changes in the growth rate of the IT security market, particularly the market for advanced threat detection and protection products, solutions that measure security effectiveness, or managed detection and response services;
- any change in the competitive landscape of the IT security market, including consolidation among our customers or competitors and strategic partnerships entered into by and between our competitors;
- deferral of orders from customers in anticipation of new products or product enhancements announced by us or our competitors;
- our ability to successfully and continuously expand our business domestically and internationally;
- reductions in customer retention rates for our subscriptions and support;
- decisions by organizations to purchase IT security solutions from larger, more established security vendors or from their primary IT equipment vendors;
- changes in our pricing policies or those of our competitors;
- any disruption in, or termination of, our relationships with channel partners;
- our inability to fulfill our customers’ orders due to supply chain delays or events that impact our manufacturers or their suppliers;
- the timing and costs related to the development or acquisition of technologies or businesses or strategic partnerships;
- the lack of synergy or the inability to realize expected synergies, resulting from acquisitions or strategic partnerships;
- our inability to execute, complete or integrate efficiently any acquisition that we may undertake;
- increased expenses, unforeseen liabilities, or write-downs and any impact on our operating results from any acquisitions we consummate;
- insolvency or credit difficulties confronting our customers, affecting their ability to purchase or pay for our products, subscriptions and services, or confronting our key suppliers, particularly our sole source suppliers, which could disrupt our supply chain;
- the cost and potential outcomes of future litigation;
- seasonality or cyclical fluctuations in our business;
- political, economic and social instability;

- public health crises, such as the COVID-19 pandemic, and related measures to protect the public health;
- future accounting pronouncements or changes in our accounting policies or practices;
- the amount and timing of operating costs and capital expenditures related to the maintenance and expansion of our business, operations and infrastructure;
- the amount and timing of costs related to any cost reduction initiatives and the impact of such initiatives; and
- increases or decreases in our revenues and expenses caused by fluctuations in foreign currency exchange rates.

Any of the above factors, individually or in the aggregate, may result in significant fluctuations in our financial and other operating results from period to period. For example, as we offer more and more solutions through subscriptions and services, it becomes increasingly difficult for us to predict whether customers will purchase our solutions as a product, a subscription or a service. If customers purchase our solutions through subscriptions and services that have less profit associated with them than our products, our operating results could be harmed. Changes in the mix of offerings sold impacts the timing of recognition of revenue for our sales. Consequently, given the different revenue recognition policies associated with sales of our products, subscriptions and services, customers purchasing more of our subscription and services offerings and less of our product offerings than we anticipated could result in our actual revenue falling below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in our stock price.

As a result of this variability, our historical results of operations should not be relied upon as an indication of future performance. Moreover, this variability and unpredictability could result in our failure to meet our operating plan or the expectations of investors or analysts for any period. If we fail to meet such expectations for these or other reasons, the market price of our common stock could fall substantially, and we could face costly lawsuits, including securities class action suits.

If we are unable to retain our customers, renew and expand our relationships with them, and add new customers, we may not be able to sustain revenue growth and we may not achieve or maintain profitability in the future.

From the year ended December 31, 2010 to the year ended December 31, 2019, our revenue grew from $11.8 million to $889.2 million, which represents a compounded annual growth rate of approximately 62%. Although we have experienced rapid growth in the past, we may not continue to grow in the future. Any success that we may experience in the future will depend, in large part, on our ability to, among other things:

- maintain, renew and expand our existing customer base;
- continue to attract new customers;
- increase revenues from existing customers through increased use of our products, subscriptions and services within their organizations;
- improve the capabilities of our products and subscriptions through research and development;
- continue to develop our cloud-based solutions;
- maintain the rate at which customers purchase our subscriptions and support;
- continue to successfully expand our business domestically and internationally; and
- successfully compete with other companies.

If we are unable to maintain consistent or increasing revenue growth or if our revenues decline, it may be difficult to achieve and maintain profitability and our business and financial results could be adversely affected. Our revenue for any prior quarterly or annual periods should not be relied upon as any indication of our future revenue or revenue growth.

If we are unable to sell additional products, subscriptions and services, as well as renewals of our subscriptions and services, to our customers, our future revenue and operating results will be harmed.

Our future success depends, in part, on our ability to expand the deployment of our platform with existing customers by selling them additional products, subscriptions and services, such as our FireEye Helix platform. This may require increasingly sophisticated and costly sales efforts and may not result in additional sales. In addition, the rate at which our customers purchase additional products, subscriptions and services depends on a number of factors, including the perceived need for additional IT security, general economic conditions, and our customers' level of satisfaction with our existing solutions they have previously purchased. If our efforts to sell additional products, subscriptions and services to our customers are not successful, our business may suffer.

Further, existing customers that purchase our platform have no contractual obligation to renew their subscriptions and support and maintenance services after the initial contract period, and given our limited operating history, we may not be able to accurately predict our retention rates. Our customers’ retention rates may decline or fluctuate as a result of a number of factors, including the level of their satisfaction with our platform, our customer support, customer budgets and the pricing of our platform compared with the products and services offered by our competitors. If our customers renew their subscriptions, they may renew for shorter contract lengths or on other terms that are less economically beneficial to us. We cannot assure you that our customers will renew their subscriptions, and if our customers do not renew their subscriptions or renew them on less favorable terms, our revenue may grow more slowly than expected, not grow at all, or even decline.

We also depend on our installed customer base for future support and maintenance revenue. We offer our support and maintenance agreements for terms that generally range between one and five years. If customers choose not to renew their support and maintenance agreements or seek to renegotiate the terms of their support and maintenance agreements prior to renewing such agreements, our revenue may grow more slowly than expected, not grow at all, or even decline.

Recent, past and future acquisitions and investments could disrupt our business and harm our financial condition and operating results.

Our success will depend, in part, on our ability to expand our platform and grow our business in response to changing technologies, customer demands and competitive pressures. In some circumstances, we may decide to do so through the acquisition of complementary businesses and technologies rather than through internal development, including, for example, our acquisitions of Clean Communications Limited (d/b/a The Email Laundry) ("The Email Laundry"), X15 Software Inc ("X15"), Verodin, Inc. ("Verodin") and Cloudvisory LLC ("Cloudvisory").

The identification of suitable acquisition candidates can be difficult, time-consuming and costly, and we may not be able to successfully complete acquisitions that we target in the future. The risks we face in connection with acquisitions, including our acquisitions of The Email Laundry, X15, Verodin and Cloudvisory include:

- diversion of management time and focus from operating our business to addressing acquisition integration challenges;
- our ability to successfully achieve billings and revenue targets of acquired businesses;
- coordination of research and development and sales and marketing functions;
- integration of product and service offerings;
- retention of key employees from the acquired company;
- changes in relationships with strategic partners as a result of product acquisitions or strategic positioning resulting from the acquisition;
- cultural challenges associated with integrating employees from the acquired company into our organization;
- integration of the acquired company’s accounting, management information, human resources and other administrative systems, as well as the acquired operations, technology and rights into our offerings, and any unanticipated expenses related to such integration;
- the need to implement or improve controls, procedures, and policies at a business that prior to the acquisition may have lacked sufficiently effective controls, procedures and policies;
- financial reporting, revenue recognition or other financial or control deficiencies of the acquired company that we don’t adequately address and that cause our reported results to be incorrect;
- liability for activities of the acquired company before the acquisition, including intellectual property infringement claims, violations of laws, commercial disputes, tax liabilities and other known and unknown liabilities;
- completing the transaction and achieving or utilizing the anticipated benefits of the acquisition within the expected timeframe, or at all;
- unanticipated write-offs or charges; and
- litigation or other claims in connection with the acquired company, including claims from terminated employees, customers, former stockholders or other third parties which may differ from or be more significant than the risks our business faces.

Our failure to address these risks or other problems encountered in connection with our past or future acquisitions and investments could cause us to fail to realize the anticipated benefits of these acquisitions or investments, cause us to incur unanticipated liabilities, and harm our business generally. Future acquisitions could also result in dilutive issuances of equity securities. For example, in October 2017, we issued 259,425 shares of common stock in connection with our acquisition of The Email Laundry; in January 2018, we issued 1,016,334 shares of common stock in connection with our acquisition of X15; and in May 2019, we issued 8,404,609 shares of common stock in connection with our acquisition of Verodin.

There is also a risk that future acquisitions will result in the incurrence of debt, contingent liabilities, amortization expenses, incremental operating expenses or the write-off of goodwill, any of which could harm our financial condition or operating results.

If we are unable to maintain successful relationships with our channel partners and technology alliance partners, or if our channel partners or technology alliance partners fail to perform, our ability to market, sell and distribute our platform will be limited, and our business, financial position and results of operations will be harmed.

In addition to our direct sales force, we rely on our indirect channel partners to sell and support our platform. We derive a substantial portion of our revenue from sales of our products, subscriptions and services through, or with the assistance of, our indirect channel, and we expect that sales through channel partners will continue to be a significant percentage of our revenue. We also partner with our technology alliance partners to design go-to-market strategies that combine our platform with products or services provided by our technology alliance partners.

Our agreements with our channel partners and our technology alliance partners are generally non-exclusive, meaning our partners may offer customers products from several different companies, including products that compete with ours. If our channel partners do not effectively market and sell our platform, choose to use greater efforts to market and sell their own products or those of our competitors, or fail to meet the needs of our customers, our ability to grow our business and sell our platform may be adversely affected. Our channel partners and technology alliance partners may cease marketing our platform with limited or no notice and with little or no penalty, and new channel partners require extensive training and may take several months or more to achieve productivity. The loss of a substantial number of our channel partners, our possible inability to replace them, or the failure to recruit additional channel partners could materially and adversely affect our results of operations. In addition, sales by channel partners are more likely than direct sales to involve collectability concerns, particularly in developing markets. Our channel partner structure could also subject us to lawsuits or reputational harm if, for example, a channel partner misrepresents the functionality of our platform to customers or violates applicable laws or our corporate policies.

Our ability to achieve revenue growth in the future will depend in part on our success in maintaining successful relationships with our channel partners, and in training our channel partners to independently sell and deploy our platform. If we are unable to maintain our relationships with these channel partners or otherwise develop and expand our indirect sales channel, or if our channel partners fail to perform, our business, financial position and results of operations could be adversely affected.

Fluctuating economic conditions make it difficult to predict revenue for a particular period, and a shortfall in revenue may harm our business and operating results.

Our revenue depends significantly on general economic conditions and the demand for products in the IT security market. Economic weakness, customer financial difficulties, and constrained spending on IT security may result in decreased revenue and earnings. Such factors could make it difficult to accurately forecast our sales and operating results and could negatively affect our ability to provide accurate forecasts to our contract manufacturers and manage our inventory purchases, contract manufacturer relationships and other costs and expenses.

In addition, concerns regarding the effects of the U.K.'s decision to exit the EU, commonly referred to as "Brexit", uncertainties related to changes in public policies such as domestic and international regulations, taxes, or international trade agreements, international trade disputes, government shutdowns, geopolitical turmoil and other disruptions to global and regional economies and markets in many parts of the world, have and may continue to put pressure on global economic conditions and overall spending on IT security. General economic weakness may also lead to longer collection cycles for payments due from our customers, an increase in customer bad debt, restructuring initiatives and associated expenses, and impairment of investments. Furthermore, the continued uncertainty in worldwide credit markets, including the sovereign debt situation in certain countries in the EU may adversely impact the ability of our customers to adequately fund their expected capital expenditures, which could lead to delays or cancellations of planned purchases of our platform.

The COVID-19 pandemic has created significant uncertainty in the global economy. The COVID-19 pandemic and health measures taken by governments and private industry in response to the pandemic, including stay-at-home orders and travel restrictions, have had significant negative effects on the economy. Continued uncertainty about the pandemic, associated economic consequences, and potential relief measures may have a long-term adverse effect on the economy, our customers, partners, suppliers, and our business.

Uncertainty about future economic conditions also makes it difficult to forecast operating results and to make decisions about future investments. Future or continued economic weakness for us or our customers, failure of our customers and markets to recover from such weakness, customer financial difficulties, and reductions in spending on IT security could have a material adverse effect on demand for our platform and consequently on our business, financial condition and results of operations.

If we fail to effectively manage our growth, our business, financial condition and results of operations would be harmed.

Although our business has experienced significant growth in the past, we cannot provide any assurance that our business will continue to grow at the same rate or at all. To improve our infrastructure, we continue to enhance our enterprise resource planning system, including revenue recognition and management software, and implement and enhance additional systems and controls. There is no assurance that we will be able to successfully scale improvements to our enterprise resource planning system or implement or scale improvements to our other systems, processes and controls in a manner that keeps pace with our growth or that such systems, processes and controls will be effective in preventing or detecting errors, omissions or fraud.

As part of our efforts to improve our internal systems, processes and controls, we have licensed technology from third parties. The support services available for such third-party technology are outside of our control and may be negatively affected by consolidation in the software industry. In addition, if we do not receive adequate support for the software underlying our systems, processes and controls, our ability to provide products and services to our customers in a timely manner may be impaired, which may cause us to lose customers, limit us to smaller deployments of our platform or increase our technical support costs.

Many of our expenses are relatively fixed, at least in the short term. If our projections or assumptions on which we base our projections are incorrect, we may not be able to adjust our expenses rapidly enough to avoid an adverse impact on our profitability or cash flows.

To manage this growth effectively, we must continue to improve our operational, financial and management systems and controls by, among other things:

- effectively hiring, training and integrating new employees, particularly members of our sales and management teams;
- further improving our key business applications, processes and IT infrastructure, including our data centers, to support our business needs;
- continuing to refine our ability to forecast our bookings, billings, revenues, expenses and cash flows;
- enhancing our information and communication systems to ensure that our employees and offices around the world are well coordinated and can effectively communicate with each other and our growing base of channel partners and customers;
- improving our internal control over financial reporting and disclosure controls and procedures to ensure timely and accurate reporting of our operational and financial results; and
- appropriately documenting and testing our IT systems and business processes.

These and other improvements in our systems and controls will require significant capital expenditures and the allocation of valuable management and employee resources. If we fail to implement these improvements effectively, our ability to manage our expected growth, ensure uninterrupted operation of key business systems and comply with the rules and regulations applicable to public reporting companies would be impaired, and our business, financial condition and results of operations would be harmed.

If the general level of advanced cyber attacks declines, or is perceived by our current or potential customers to have declined, our business could be harmed.

Our business is substantially dependent on enterprises and governments recognizing that advanced cyber attacks are pervasive and are not effectively prevented by legacy security solutions. High visibility attacks on prominent enterprises and governments have increased market awareness of the problem of advanced cyber attacks and help to provide an impetus for enterprises and governments to devote resources to protecting against advanced cyber attacks, such as testing our platform, purchasing it, and broadly deploying it within their organizations. If advanced cyber attacks were to decline, or enterprises or governments perceived that the general level of advanced cyber attacks have declined, our ability to attract new customers and expand our offerings within existing customers could be materially and adversely affected. A change in the threat landscape may reduce the demand from customers or prospects for our solutions, and therefore could increase our sales cycles and harm our business, results of operations and financial condition.

Disruptions or other business interruptions that affect the availability of our Dynamic Threat Intelligence ("DTI") cloud, our Helix platform, or other cloud-based products and services we offer or may offer could adversely impact our customer relationships as well as our overall business.

When a customer purchases one or more of our threat prevention appliances, it must also purchase a subscription to our DTI cloud for a term of one to three years. Our DTI cloud enables global sharing of threat intelligence uploaded by any of our customers' cloud-connected FireEye appliances. We also offer additional cloud-based platforms such as our Email Threat Prevention, Mobile Threat Prevention and Threat Analytics Platforms and provide security solutions through our own and our co-branded security operation centers.

Our customers depend on the continuous availability of our DTI cloud and other cloud-based products and services. Our cloud-based products and services are vulnerable to damage or interruption from a variety of sources, including damage or interruption caused by fire, earthquake, power loss, telecommunications or computer systems failure, cyber attack, human error, terrorist acts and war. Our data centers and networks may experience technical failures and downtime, may fail to distribute appropriate updates, or may fail to meet the increased requirements of a growing customer base, any of which could temporarily or permanently expose our customers' networks, leaving their networks unprotected against the latest security threats or, in the case of technical failures and downtime of security operation centers, all security threats.

In addition, there may also be system or network interruptions if new or upgraded systems are defective or not installed properly. Moreover, interruptions in our subscription updates could result in a failure of our DTI cloud to effectively update customers' hardware products and thereby leave our customers more vulnerable to attacks. Interruptions or failures in our service delivery could cause customers to terminate their subscriptions with us, could adversely affect our retention rates, and could harm our ability to attract new customers. Our business would also be harmed if our customers believe that our DTI cloud or other cloud-based products and services are unreliable.

In addition, we provide our cloud-based products and services through third-party data center hosting facilities located in the United States and other countries. While we control and have access to our servers and all of the components of our network that are located in our data centers, we do not control the operation of these facilities. The owners of the data center facilities have no obligation to renew their agreements with us on commercially reasonable terms, or at all. If we are unable to renew these agreements on commercially reasonable terms, or if one of our data center operators is acquired, we may be required to transfer our servers and other infrastructure to new data center facilities, and we may incur significant costs and possible service interruption in connection with doing so.

Furthermore, we have and will continue to make substantial investments to support growth at our data centers and improve the profitability of our cloud platform. If our cloud-based server costs were to increase, our business, results of operations and financial condition may be adversely affected. Ongoing improvements to cloud infrastructure may be more expensive than we anticipate, and may not yield the expected savings in operating costs or the expected performance benefits. In addition, we may be required to re-invest any cost savings achieved from prior cloud infrastructure improvements in future infrastructure projects to maintain the levels of service required by our customers. We may not be able to maintain or achieve cost savings from our investments, which could harm our financial results.

If organizations do not adopt cloud-based SaaS-delivered security solutions, our ability to grow our business and results of operations may be adversely affected.

We believe our future success will depend in large part on the growth, if any, in the market for cloud-based SaaS-delivered security solutions. The use of SaaS solutions to manage and automate security and IT operations is at an early stage and rapidly evolving. As such, it is difficult to predict its potential growth, if any, customer adoption and retention rates, customer demand for our solutions, or the success of existing competitive products. Any expansion in our market depends on a number of factors, including the cost, performance, and perceived value associated with our solutions and those of our competitors. If our solutions do not achieve widespread adoption or there is a reduction in demand for our solutions due to a lack of customer acceptance, technological challenges, competing products, privacy concerns, decreases in corporate spending, weakening economic conditions or otherwise, it could result in early terminations, reduced customer retention rates, or decreased revenue, any of which would adversely affect our business, results of operations, and financial results. We do not know whether the trend in adoption of cloud-based SaaS-delivered security solutions we have experienced in the past will continue in the future. Furthermore, if we or other SaaS security providers experience security incidents, loss or disclosure of customer data, disruptions in delivery, or other problems, the market for SaaS solutions as a whole, including our security solutions, may be negatively affected. You should consider our business and prospects in light of the risks and difficulties we encounter in this new and evolving market.

Actions that we are taking to restructure our business to better align with our business model transition strategy may be costly and may not be as effective as anticipated.

On April 23, 2020, our board of directors approved a restructuring plan to streamline the Company's operations to more closely align expenses to the Company's projected revenue, position the Company for improved operating performance and allow the Company to increase investment in the growth areas of the business. The restructuring plan resulted in the reduction of 6% of the Company's workforce as well as the exiting and downsizing of certain real estate facilities and the impairment of certain assets and consisted of severance, other one-time termination benefits and other restructuring related costs. These charges are primarily cash-based and have been recognized in the second quarter of 2020. The Company expects the restructuring will reduce total non-GAAP operating expenses by at least $25 million in 2020 compared to 2019. The actions associated with the restructuring plan were completed by the end of the second quarter of 2020. However, there may be adverse consequences related to such actions which include various charges for severance and severance-related costs and the loss of propriety information and in-house knowledge in connection with the planned reduction in our workforce. This type of restructuring activity may result in business disruptions and may not produce the full efficiency and cost reduction benefits anticipated. Further, the benefits may be realized later than expected and the cost of implementing these measures may be greater than anticipated. If these measures are not successful, we may need to undertake additional cost reduction efforts, which could result in future charges. Moreover, the restructuring plan may cause business disruptions with customers and elsewhere if our cost reduction efforts prove ineffective, and our business may not be more efficient or effective than prior to implementation of the plan. Our restructuring activities, including the related charges and the impact of the related workforce reduction, could have a material adverse effect on our business, operating results and financial condition.

We rely on our management team and other key employees and will need additional personnel to grow our business, and the loss of one or more key employees or our inability to hire, integrate, train and retain qualified personnel, including members for our board of directors, could harm our business.

Our future success is substantially dependent on our ability to hire, integrate, train, retain and motivate the members of our management team and other key employees throughout our organization, including key employees obtained through our acquisitions. Competition for highly skilled personnel is intense, especially in the San Francisco Bay Area and the Washington D.C. Area, where we have a substantial presence and need for highly skilled personnel. We may not be successful in hiring or retaining qualified personnel to fulfill our current or future needs, and potential changes in U.S. immigration and work authorization laws and regulations, including those that restrain the flow of technical and professional talent, may make it difficult to renew or obtain visas for highly skilled personnel that we have hired or are actively recruiting. We are also substantially dependent on the continued service of our existing engineering personnel because of the complexity of our platform. Our competitors may be successful in recruiting and hiring members of our management team or other key employees, including key employees obtained through our acquisitions, and it may be difficult for us to find suitable replacements on a timely basis, on competitive terms, or at all. Also, to the extent we hire employees from mature public companies with significant financial resources, we may be subject to allegations that such employees have been improperly solicited, or that they have divulged proprietary or other confidential information or that their former employers own such employees' inventions or other work product.

The workforce reductions made in connection with our recently approved restructuring plan may adversely affect our ability to attract and retain highly skilled employees. Even if our key personnel are not directly affected by these reductions, the termination of others may have a negative impact on morale and our ability to retain current personnel, as well as our ability to attract qualified new personnel in the future.

During the past six months, our President retired, we appointed a new Chief Operating Officer, and we made other organizational changes. Leadership transitions and management changes can be inherently difficult to manage and may cause uncertainty or a disruption to our business or may increase the likelihood of turnover in key officers and employees. Our success depends in part on having a successful leadership team. If we cannot effectively manage the leadership transitions and management changes, it could make it more difficult to successfully operate our business and pursue our business goals.

In addition, we believe that it is important to establish and maintain a corporate culture that facilitates the maintenance and transfer of institutional knowledge within our organization and also fosters innovation, teamwork, a passion for customers and a focus on execution. Any of our organizational changes may result in a loss of institutional knowledge and cause disruptions to our business. In addition, if we are not successful in integrating our new Chief Operating Officer and other key employees into our organization, such failure could delay or hinder our product development efforts and the achievement of our strategic objectives, which could adversely affect our business, financial condition and results of operations.

Our employees, including our executive officers, work for us on an "at-will" basis, which means they may terminate their employment with us at any time. We do not maintain key person life insurance policies on any of our key employees. If one or more of our key employees resigns or otherwise ceases to provide us with their service, our business could be harmed.

If we do not effectively hire, integrate and train our direct sales force, we may be unable to add new customers or increase sales to our existing customers, and our business will be adversely affected.

We continue to be substantially dependent on our direct sales force to obtain new customers and increase sales with existing customers. There is significant competition for sales personnel with the skills and technical knowledge that we require. Our ability to achieve revenue growth will depend, in large part, on our success in recruiting, integrating, training and retaining sufficient numbers of sales personnel to support our growth, particularly in international markets. New hires require significant training and may take significant time before they achieve full productivity. Our recent hires and planned hires may not become productive as quickly as we expect, and we may be unable to hire or retain sufficient numbers of qualified individuals in the markets where we do business or plan to do business. If we are unable to hire and train a sufficient number of effective sales personnel, or the sales personnel we hire are not successful in obtaining new customers or increasing sales to our existing customer base, our business will be adversely affected.

Our sales cycles can be long and unpredictable, and our sales efforts require considerable time and expense. As a result, our sales, billings and revenue are difficult to predict and may vary substantially from period to period, which may cause our results of operations to fluctuate significantly.

Our results of operations may fluctuate, in part, because of the resource intensive nature of our sales efforts, the length and variability of our sales cycle and the short-term difficulty in adjusting our operating expenses. Our results of operations depend in part on sales to large organizations. The length of our sales cycle, from proof of concept to delivery of and payment for our platform, is typically three to nine months but can be more than a year. To the extent our competitors develop products that our prospective customers view as equivalent to ours, our average sales cycle may increase. Because the length of time required to close a sale varies substantially from customer to customer, it is difficult to predict exactly when, or even if, we will make a sale with a potential customer. As a result, large individual sales have, in some cases, occurred in quarters subsequent to or in advance of those we anticipated, or have not occurred at all. We are generally billing a number of large deals in any quarter, and the loss or delay of one or more of these large transactions in a quarter could impact our results of operations for that quarter and any future quarters for which revenue from that transaction is delayed. Furthermore, some sales (such as product sales) generally result in immediate recognition of revenue, while other sales, such as product subscription sales, require the recognition of revenue over periods of one year or longer typically. As a result of these factors, it is difficult for us to forecast our revenue accurately in any quarter based on our internal forecasts of billings. Because a substantial portion of our expenses are relatively fixed in the short term, our results of operations will suffer if our revenue falls below our expectations in a particular quarter, which could cause the price of our common stock to decline.

We rely on revenue from sales of products, subscriptions, and maintenance and support, and because we recognize revenue from most of these sales over the term of the relevant useful life or subscription period, downturns or upturns in sales are not immediately reflected in full in our results of operations.

Revenue from sales of our products, subscriptions, and maintenance and support accounts for a significant portion of our total revenue. New or renewal sales of subscription and maintenance and support contracts may decline or fluctuate as a result of a number of factors, including customers' level of satisfaction with our products and subscriptions, the actual or perceived efficacy of our security solutions, the prices of our products and subscriptions, the prices of products and subscriptions offered by our competitors or reductions in our customers' spending levels. If our sales of new or renewal subscription and service contracts decline, our revenue and revenue growth rate may decline and adversely affect our business. In addition, we recognize revenue from most of our security appliances sales ratably over the useful life, and we recognize revenue from our subscriptions and maintenance and support contracts revenue ratably over the term of the relevant contract period, which is generally between one to five years. As a result, much of the product, subscription and support revenue we report each quarter is derived from sales in prior quarters. Consequently, a decline in new or renewal sales in any one quarter will not be fully reflected in revenue in that quarter but will negatively affect our revenue in future quarters. Accordingly, the effect of significant decreases in the market acceptance of, or demand for, our intelligence-dependent security appliances, subscriptions or maintenance and support contracts may not be immediately apparent from our results of operations until future periods. Also, it is difficult for us to rapidly increase our revenue through additional sales in any period, as the majority of our revenue is derived from sales of our products, subscriptions and services sold in prior periods. Furthermore, any increases in the average term of our subscriptions or maintenance and support contracts would result in a longer revenue recognition period, and could reduce the amount of revenue recognized in each period.

The sales prices of our products, subscriptions and services may decrease or the mix of our sales may change, which may reduce our gross profits and adversely impact our financial results.

The sales prices for our products, subscriptions and services may decline for a variety of reasons, including competitive pricing pressures, discounts, a change in our mix of products, subscriptions and services, anticipation of the introduction of new products, subscriptions or services, introduction of new pricing and packaging or promotional programs. Competition continues to increase in the market segments in which we participate, and we expect competition to further increase in the future, thereby leading to increased pricing pressures. Larger competitors with more diverse product and service offerings may reduce the price of products or subscriptions that compete with ours or may bundle them with other products and subscriptions. Additionally, although we price our products and subscriptions worldwide in U.S. dollars, currency fluctuations in certain countries and regions may negatively impact actual prices that partners and customers are willing to pay in those countries and regions, or the effective prices we realize in our reporting currency. Furthermore, we anticipate that the sales prices and gross profits for our appliance-based products will decrease over product life cycles. We cannot assure you that we will be successful in developing and introducing new offerings with enhanced functionality on a timely basis, or that our new subscription offerings, if introduced, will enable us to maintain our gross profits at levels that will allow us to achieve profitability.

If we do not accurately anticipate and respond promptly to changes in our customers' technologies, business plans or security needs, our competitive position and prospects could be harmed.

The IT security market has grown quickly and is expected to continue to evolve rapidly. Moreover, many of our customers operate in markets characterized by rapidly changing technologies and business plans, which require them to add numerous network access points and adapt to increasingly complex IT networks, incorporating a variety of hardware, software applications, operating systems and networking protocols. As their technologies and business plans grow more complex, we expect these customers to face new and increasingly sophisticated methods of attack. We face significant challenges in ensuring that our platform effectively identifies and responds to these advanced and evolving attacks without disrupting our customers' network performance. As a result of the continued rapid innovations in the technology industry, including the rapid growth of smart phones, tablets and other devices, the trend of "bring your own device" in enterprises, and the rapidly evolving Internet of Things, we expect the networks of our customers to continue to change rapidly and become more complex.

We have identified a number of new products and enhancements to our platform that we believe are important to our continued success in the IT security market, including our FireEye Helix platform and enhancements to our endpoint solution. There can be no assurance that we will be successful in developing and marketing, on a timely basis, such new products or enhancements or that our new products or enhancements will adequately address the changing needs of the marketplace. In addition, some of our new products and enhancements may require us to develop new hardware architectures that involve complex, expensive and time-consuming research and development processes. Although the market expects rapid introduction of new products and enhancements to respond to new threats, the development of these products and enhancements is difficult and the timetable for commercial release and availability is uncertain, as there can be significant time lags between initial beta releases and the commercial availability of new products and enhancements. We may experience unanticipated delays in the availability of new products and enhancements to our platform and fail to meet customer expectations with respect to the timing of such availability. If we do not quickly respond to the rapidly changing and rigorous needs of our customers by developing, releasing and making available on a timely basis new products and enhancements to our platform, such as our FireEye Helix platform and enhancements to our endpoint solution, that can adequately respond to advanced threats and our customers' needs, our competitive position and business prospects will be harmed. Furthermore, from time to time, we or our competitors may announce new products with capabilities or technologies that could have the potential to replace or shorten the life cycles of our existing products. There can be no assurance that announcements of new products will not cause customers to defer purchasing our existing products.

Additionally, the process of developing new technology is expensive, complex and uncertain. The success of new products and enhancements depends on several factors, including appropriate component costs, timely completion and introduction, differentiation of new products and enhancements from those of our competitors, and market acceptance. To maintain our competitive position, we must continue to commit significant resources to developing new products or enhancements to our platform before knowing whether these investments will be cost-effective or achieve the intended results. There can be no assurance that we will successfully identify new product opportunities, develop and bring new products or enhancements to market in a timely manner, or achieve market acceptance of our platform, or that products and technologies developed by others will not render our platform obsolete or noncompetitive. If we expend significant resources on researching and developing products or enhancements to our platform and such products or enhancements are not successful, our business, financial position and results of operations may be adversely affected.

Our current research and development efforts may not produce successful products or enhancements to our platform that result in significant revenue, cost savings or other benefits in the near future, if at all.

We must continue to dedicate significant financial and other resources to our research and development efforts if we are to maintain our competitive position. However, developing products and enhancements to our platform is expensive and time consuming, and there is no assurance that such activities will result in significant new marketable products or enhancements to our platform, design improvements, cost savings, revenue or other expected benefits. If we spend significant resources on research and development and are unable to generate an adequate return on our investment, our business and results of operations may be materially and adversely affected.

If we are unable to increase sales of our solutions to large organizations while mitigating the risks associated with serving such customers, our business, financial position and results of operations may suffer.

Our growth strategy is dependent, in part, upon increasing sales of our solutions to large enterprises and governments. Sales to large customers involve risks that may not be present (or that are present to a lesser extent) with sales to smaller entities. These risks include:

- increased purchasing power and leverage held by large customers in negotiating contractual arrangements with us;
- more stringent or costly requirements imposed upon us in our support service contracts with such customers, including stricter support response times and penalties for any failure to meet support requirements;
- more complicated implementation processes;
- longer sales cycles and the associated risk that substantial time and resources may be spent on a potential customer that ultimately elects not to purchase our platform or purchases less than we hoped;
- closer relationships with, and dependence upon, large technology companies who offer competitive products; and
- more pressure for discounts and write-offs.

In addition, because security breaches with respect to larger, high-profile enterprises are likely to be heavily publicized, there is increased reputational risk associated with serving such customers. If we are unable to increase sales of our offerings to large enterprise and government customers while mitigating the risks associated with serving such customers, our business, financial position and results of operations may suffer.

Seasonality may cause fluctuations in our revenue.

We believe there are significant seasonal factors that may cause us to record higher revenue in some quarters compared with others. We believe this variability is largely due to (i) our customers' budgetary and spending patterns, as many customers spend the unused portions of their discretionary budgets prior to the end of their fiscal years, and (ii) our sales compensation plans, which are typically structured around annual quotas and stair step commission rates. For example, we have historically recorded our highest level of revenue in our fourth quarter, which we believe corresponds to the fourth quarter of a majority of our customers. Similarly, we have historically recorded our second-highest level of revenue in our third quarter, which corresponds to the fourth quarter of U.S. federal agencies and other customers in the U.S. federal government. Our growth rate over the last couple years may have made seasonal fluctuations more difficult to detect. If our rate of growth slows over time, seasonal or cyclical variations in our operations may become more pronounced, and our business, results of operations and financial position may be adversely affected.

Claims by others that we infringe their proprietary technology or other rights could harm our business.

Technology companies frequently enter into litigation based on allegations of patent infringement or other violations of intellectual property rights. In addition, patent holding companies seek to monetize patents they have purchased or otherwise obtained. As we face increasing competition and gain an increasingly higher profile, the possibility of intellectual property rights claims against us grows. From time to time, third parties have asserted, and we expect that third parties will continue to assert, claims of infringement of intellectual property rights against us. For example, on December 29, 2017, we executed Confidential Patent License Agreements with Finjan Holdings, Inc. (“Finjan”), whereby we resolved all pending litigation matters. Under the terms of the settlement agreement, we paid Finjan a one-time net cash settlement amount of $12.5 million in December 2017, in exchange for the resolution and settlement of all claims between FireEye and Finjan and for cross-licenses between the companies of certain issued patents and patent applications. Other security companies have paid amounts to the same plaintiff to license some of the patents asserted against us. Third parties may in the future also assert claims against our customers or channel partners, whom our standard license and other agreements obligate us to indemnify against claims that our products infringe the intellectual property rights of third parties. While we intend to increase the size of our patent portfolio, many of our competitors and others may now and in the future have significantly larger and more mature patent portfolios than we have. In addition, future litigation may involve patent holding companies or other patent owners who have no relevant product offerings or revenue and against whom our own patents may therefore provide little or no deterrence or protection. Any claim of intellectual property infringement by a third party, even a claim without merit, could cause us to incur substantial costs defending against such claim, could distract our management from our business and could require us to cease use of such intellectual property. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by the discovery process.

Although third parties may offer a license to their technology or other intellectual property, the terms of any offered license may not be acceptable, and the failure to obtain a license or the costs associated with any license could cause our business, financial condition and results of operations to be materially and adversely affected. We may also be subject to additional fees or be required to obtain new licenses if any of our licensors allege that we have not properly paid for such licenses or that we have improperly used the technologies under such licenses. In addition, some licenses may be non-exclusive, and therefore our competitors may have access to the same technology licensed to us. If a third party does not offer us a license to its technology or other intellectual property on reasonable terms, or at all, we could be enjoined from continued use of such intellectual property. As a result, we may be required to develop alternative, non-infringing technology, which could require significant time (during which we could be unable to continue to offer our affected products, subscriptions or services), effort, and expense and may ultimately not be successful. Furthermore, a successful claimant could secure a judgment, or we may agree to a settlement that prevents us from distributing certain products, providing certain subscriptions or performing certain services or that requires us to pay substantial damages, royalties or other fees. Any of these events could harm our business, financial condition and results of operations.

Because we depend on a limited number of manufacturers to build our appliances, we are susceptible to manufacturing delays and pricing fluctuations that could prevent us from shipping customer orders on time, or on a cost-effective basis, which may result in the loss of sales and customers.

We depend on a limited number of third-party manufacturers, primarily Flextronics Telecom Systems, Ltd., as sole source manufacturers for our appliances. Our reliance on third-party manufacturers reduces our control over the manufacturing process and exposes us to risks, including reduced control over quality assurance, product costs, product supply, upgrades and expansions and timing. Any manufacturing disruption by these third-party manufacturers could severely impair our ability to fulfill orders on time. If we are unable to manage our relationships with these third-party manufacturers effectively, or if these manufacturers suffer delays or disruptions for any reason, experience increased manufacturing lead-times, capacity constraints or quality control problems in their manufacturing operations, or fail to meet our future requirements for timely delivery, our ability to ship products to our customers would be severely impaired, and our business and results of operations would be harmed.

Further, the portion of our appliances that are sourced outside the United States may be subject to additional logistical risks or risks associated with complying with local rules and regulations in foreign countries. Significant changes to existing international trade agreements could lead to sourcing or logistics disruption resulting from import delays or the imposition of increased tariffs on our sourcing partners. For example, the United States and Chinese governments have each enacted, and discussed more potential, import tariffs. These tariffs, depending on their ultimate scope and how they are implemented, could negatively impact our business by increasing our costs and impair our ability to fulfill orders.

In addition, our reliance on third-party manufacturers exposes us to the risk that certain minerals, known as “conflict minerals,” that are contained in our products have originated in the Democratic Republic of the Congo or an adjoining country. As a result of the passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, the SEC adopted disclosure requirements for public companies whose products contain conflict minerals that are necessary to the functionality or production of such products. Although the SEC has provided guidance with respect to a portion of the conflict minerals filing requirements that somewhat reduced the reporting required, we have incurred and expect to incur additional costs to comply with the disclosure requirements, including costs related to determining the source of the conflict minerals used in our products. Moreover, the implementation of these requirements could adversely affect the sourcing, availability and pricing of materials used in the manufacture of our products to the extent that there may be only a limited number of suppliers offering "conflict free" minerals that can be used in our products. There can be no assurance that we will be able to obtain such minerals in sufficient quantities or at competitive prices. We may also encounter customers who require that all of the components of our products be certified as conflict free. If we are not able to meet customer requirements, such customers may choose to not purchase our products, which could impact our sales.

Our third-party manufacturers typically fulfill our supply requirements on the basis of individual orders. We are subject to a risk of supply shortages and changes in pricing terms because we do not have long-term contracts with our third-party manufacturers that guarantee capacity, the continuation of particular pricing terms or the extension of credit limits. Our contract with our primary manufacturer permits it to terminate such contract at its convenience, subject to prior notice requirements. Any production interruptions for any reason, such as a natural disaster, epidemic, capacity shortages, or quality problems at one of our manufacturing partners would negatively affect sales of our products and adversely impact our business and results of operations.

Our failure to raise additional capital or generate the significant capital necessary to expand our operations and invest in new products could reduce our ability to compete and could harm our business.

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges, including the need to develop new products and enhancements to our platform, improve our operating infrastructure or acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional equity financing, our stockholders may experience significant dilution of their ownership interests and the per share value of our common stock could decline. Furthermore, if we engage in additional debt financing, the holders of debt would have priority over the holders of common stock, and we may be required to accept terms that restrict our ability to incur additional indebtedness. We may also be required to take other actions that would otherwise be in the interests of the debt holders and force us to maintain specified liquidity or other ratios, any of which could harm our business, results of operations, and financial condition. If we need additional capital and cannot raise it on acceptable terms, we may not be able to, among other things:

- develop or enhance our products and subscriptions;
- continue to expand our sales and marketing and research and development organizations;
- acquire complementary technologies, products or businesses;
- expand operations, in the United States or internationally;
- hire, train and retain employees; or
- respond to competitive pressures or unanticipated working capital requirements.

Our failure to do any of these things could harm our business, financial condition and results of operations.

We may be unable to protect our intellectual property adequately, which could harm our business, financial condition and results of operations.

We believe that our intellectual property is an essential asset of our business. We rely on a combination of patent, copyright, trademark and trade secret laws, as well as confidentiality procedures and contractual provisions, to establish and protect our intellectual property rights in the United States and abroad. The efforts we have taken to protect our intellectual property may not be sufficient or effective, and our trademarks, copyrights and patents may be held invalid or unenforceable. Any U.S. or other patents issued to us may not be sufficiently broad to protect our proprietary technologies, and given the costs of obtaining patent protection, we may choose not to seek patent protection for certain of our proprietary technologies. We may not be effective in policing unauthorized use of our intellectual property, and even if we do detect violations, litigation may be necessary to enforce our intellectual property rights. Any enforcement efforts we undertake, including litigation, could be time-consuming and expensive, could divert management's attention and may result in a court determining that our intellectual property rights are unenforceable. If we are not successful in cost-effectively protecting our intellectual property rights, our business, financial condition and results of operations could be harmed.

We incorporate technology from third parties into our products, and our inability to obtain or maintain rights to the technology could harm our business.

We incorporate technology from third parties into our products. We cannot be certain that our suppliers and licensors are not infringing the intellectual property rights of third parties or that the suppliers and licensors have sufficient rights to the technology in all jurisdictions in which we may sell our products. Some of our agreements with our suppliers and licensors may be terminated for convenience by them. If we are unable to obtain or maintain rights to any of this technology because of intellectual property infringement claims brought by third parties against our suppliers and licensors or against us, or if we are unable to continue to obtain such technology or enter into new agreements on commercially reasonable terms, our ability to develop and sell products, subscriptions and services containing such technology could be severely limited, and our business could be harmed. Additionally, if we are unable to obtain necessary technology from third parties, including certain sole suppliers, we may be forced to acquire or develop alternative technology, which may require significant time, cost and effort and may be of lower quality or performance standards. This would limit and delay our ability to offer new or competitive products and increase our costs of production. If alternative technology cannot be obtained or developed, we may not be able to offer certain functionality as part of our products, subscriptions and services. As a result, our margins, market share and results of operations could be significantly harmed.

Our products and subscriptions contain third-party open source software components, and failure to comply with the terms of the underlying open source software licenses could restrict our ability to sell our products and subscriptions.

Our products and subscriptions contain software modules licensed to us by third-party authors under "open source" licenses. The use and distribution of open source software may entail greater risks than the use of third-party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the code. Some open source licenses contain requirements that we make available source code for modifications or derivative works we create based upon the type of open source software we use. If we combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release the source code of our proprietary software to the public. This would allow our competitors to create similar products with lower development effort and time and ultimately could result in a loss of sales for us.

Although we monitor our use of open source software to try to avoid subjecting our products and subscriptions to conditions, the terms of many open source licenses have not been interpreted by U.S. courts, and there is a risk that these licenses could be construed in ways that could impose unanticipated conditions or restrictions on our ability to commercialize products and subscriptions incorporating such software. Moreover, we cannot assure you that our processes for controlling our use of open source software in our products and subscriptions will be effective. From time to time, we may face claims from third parties asserting ownership of, or demanding release of, the open source software or derivative works that we developed using such software (which could include our proprietary source code), or otherwise seeking to enforce the terms of the applicable open source license. These claims could result in litigation. If we are held to have breached the terms of an open source software license, we could be required to seek licenses from third parties to continue offering our products on terms that are not economically feasible, to re-engineer our products, to discontinue the sale of our products if re-engineering could not be accomplished on a timely or cost-effective basis, or to make generally available, in source code form, our proprietary code, any of which could adversely affect our business, results of operations and financial condition.

U.S. federal, state and local government sales are subject to a number of challenges and risks that may adversely impact our business.

Sales to U.S. federal, state, and local governmental agencies have accounted for, and may in the future account for, a significant portion of our revenue. Sales to such government entities are subject to the following risks:

- selling to governmental agencies can be highly competitive, expensive and time consuming, often requiring significant upfront time and expense without any assurance that such efforts will generate a sale;

- government certification requirements applicable to our products may change and, in doing so, restrict our ability to sell into the U.S. federal government sector until we have attained the revised certification;

- government demand and payment for our products and services may be impacted by government shutdowns, public sector budgetary cycles, contracting requirements and funding authorizations, with funding reductions or delays adversely affecting public sector demand for our products and services;

- we sell our platform to governmental agencies through our indirect channel partners, and these agencies may have statutory, contractual or other legal rights to terminate contracts with our distributors and resellers for convenience or due to a default, and any such termination may adversely impact our future results of operations;

- governments routinely investigate and audit government contractors' administrative processes, and any unfavorable audit could result in the government refusing to continue buying our platform, which would adversely impact our revenue and results of operations, or institute fines or civil or criminal liability if the audit were to uncover improper or illegal activities; and

- governments may require certain products purchased by it to be manufactured in the United States and other relatively high-cost manufacturing locations, and we may not manufacture all products in locations that meet these requirements, affecting our ability to sell these products to governmental agencies.

Our ability to maintain customer satisfaction depends in part on the quality of our professional service organization and technical and other support services, including the quality of the support provided on our behalf by certain channel partners. Failure to maintain high-quality customer support could have a material adverse effect on our business, financial condition and results of operations.

Once our platform is deployed within our customers' networks, our customers depend on our technical and other support services, as well as the support of our channel partners, to resolve any issues relating to the implementation and maintenance of our platform. If we or our channel partners do not effectively assist our customers in deploying our platform, succeed in helping our customers quickly resolve post-deployment issues, or provide effective ongoing support, our ability to sell additional products, subscriptions or services as part of our platform to existing customers would be adversely affected and our reputation with potential customers could be damaged. Many larger organizations have more complex networks and require higher levels of support than smaller customers. If we fail to meet the requirements of our larger customers, it may be more difficult to execute on our strategy of upselling and cross selling with these customers. Additionally, if our channel partners do not effectively provide support to the satisfaction of our customers, we may be required to provide this level of support to those customers, which would require us to hire additional personnel and to invest in additional resources. It can take significant time and resources to recruit, hire, and train qualified technical support employees. We may not be able to hire such resources fast enough to keep up with demand. To the extent that we or our channel partners are unsuccessful in hiring, training, and retaining adequate support resources, our ability and the ability of our channel partners to provide adequate and timely support to our customers will be negatively impacted, and our customers' satisfaction with our platform will be adversely affected. Additionally, to the extent that we need to rely on our sales engineers to provide post-sales support, our sales productivity will be negatively impacted, which would harm our results of operations.

Our operating history and changes to our business model makes it difficult to evaluate our current business and prospects and may increase the risk that we will not be successful.

We were founded in 2004, and we shipped our first commercially successful solution for on-premises network security in 2008. Since then, we have continued to expand our offerings, both organically and through acquisitions, to address changes in the threat environment, evolving customer requirements, and the continued migration of workloads to cloud platforms. Acquired solutions included Mandiant Corporation's endpoint threat detection, response and remediation products, advanced threat intelligence capabilities and incident response and security consulting services; Invotas' security automation and orchestration functionality; iSIGHT's standalone threat intelligence subscriptions; Verodin's security instrumentation platform; and Cloudvisory's cloud visibility application. The markets for many of our acquired solutions are in the early stages of development and customer adoption remains limited. Additionally, most of our acquired solutions are sold as subscriptions, often to large enterprises or governments, and contract terms may vary significantly. The shift in sales mix from mature on-premise appliance-based solutions to cloud-based subscriptions in early-stage markets makes it difficult to evaluate our current business and prospects and plan for and model our future growth. We have encountered and will continue to encounter risks and uncertainties frequently encountered by emerging technology-based companies in developing markets.

If our assumptions regarding these risks and uncertainties are incorrect or change in response to changes in the IT security market, our results of operations and financial results could differ materially from our plans and forecasts. Although we have experienced rapid growth in the past, there is no assurance that such growth will continue. Any success we may experience in the future will depend in large part on our ability to, among other things:

- maintain and expand our customer base and the ways in which customers use our products and services;
- expand revenue from existing customers through increased or broader use of our products, subscriptions and services within their organizations;
- grow our revenues from software, subscriptions and recent offerings from acquisitions such as Verodin;
- convince customers to allocate a fixed portion of their annual IT budgets to our products and services;
- improve the performance and capabilities of our platform through research and development;
- effectively expand our business domestically and internationally; and
- successfully compete with other companies that currently provide, or may in the future provide, solutions like ours that protect against advanced cyber attacks, measure security effectiveness, or investigate and respond to attacks.

If we are unable to achieve our key objectives, including the objectives listed above, our business and results of operations will be adversely affected and the fair market value of our common stock could decline.

Managing the supply of our products and their components is complex. Insufficient supply and inventory may result in lost sales opportunities or delayed revenue, while excess inventory may harm our gross margins.

Our third-party manufacturers procure components and build our products based on our forecasts, and we generally do not hold inventory for a prolonged period of time. These forecasts are based on estimates of future demand for our products, which are in turn based on historical trends and analyses from our sales and marketing organizations, adjusted for overall market conditions. In order to reduce manufacturing lead times and plan for adequate component supply, from time to time we may issue forecasts for components and products that are non-cancelable and non-returnable.

Our inventory management systems and related supply chain visibility tools may be inadequate to enable us to make accurate forecasts and effectively manage the supply of our products and product components. Supply management remains an area of increasing focus as we balance the need to maintain supply levels that are sufficient to ensure competitive lead times against the risk of obsolescence because of rapidly changing technology and customer requirements. If we ultimately determine that we have excess supply, we may have to reduce our prices and write-down inventory, which in turn could result in lower gross margins. Alternatively, insufficient supply levels may lead to shortages that result in delayed revenue or loss of sales opportunities altogether as potential customers turn to competitors' products that may be readily available. Additionally, any increases in the time required to manufacture or ship our products could result in supply shortfalls. If we are unable to effectively manage our supply and inventory, our results of operations could be adversely affected.

Because some of the key components in our products come from limited sources of supply, we are susceptible to supply shortages or supply changes, which could disrupt or delay our scheduled product deliveries to our customers and may result in the loss of sales and customers.

Our platform relies on key components, including a motherboard and chassis, which our third-party manufacturers purchase on our behalf from a sole source provider. The manufacturing operations of some of our component suppliers are geographically concentrated in Asia, which makes our supply chain vulnerable to regional disruptions. A localized health risk affecting employees at these facilities, such as the current COVID-19 pandemic, or the spread of a pandemic influenza, could impair the total volume of components that we are able to obtain, which could result in substantial harm to our results of operations. Similarly, a fire, flood, earthquake, tsunami or other disaster, condition or event such as political instability, terrorist act, civil unrest or a power outage that adversely affects any of these component suppliers' facilities could significantly affect our ability to obtain the components needed for our products, which could result in a substantial loss of sales and revenue and a substantial harm to our results of operations.

We do not have volume purchase contracts with any of our component suppliers, and they could cease selling to us at any time. In addition, our component suppliers change their selling prices frequently in response to market trends, including industry-wide increases in demand, and because we do not have contracts with these suppliers, we are susceptible to price fluctuations related to raw materials and components. If we are unable to pass component price increases along to our customers or maintain stable pricing, our gross margins and results of operations could be negatively impacted. If we are unable to obtain a sufficient quantity of these components in a timely manner for any reason, sales of our products could be delayed or halted or we could be forced to expedite shipment of such components or our products at dramatically increased costs, which would negatively impact our revenue and gross margins. Additionally, poor quality in any of the sole-sourced components in our products could result in lost sales or lost sales opportunities. If the quality of the components does not meet our or our customers' requirements, if we are unable to obtain components from our existing suppliers on commercially reasonable terms, or if any of our sole source providers cease to remain in business or continue to manufacture such components, we could be forced to redesign our products and qualify new components from alternate suppliers. The resulting stoppage or delay in selling our products and the expense of redesigning our products could result in lost sales opportunities and damage to customer relationships, which would adversely affect our business and results of operations.

If we fail to adequately protect personal information or other information we process or maintain, our business, financial condition and operating results could be adversely affected.

A wide variety of provincial, state, national, and international laws and regulations apply to the collection, use, retention, protection, disclosure, transfer and other processing of personal data and other information. Evolving and changing definitions of personal data and personal information within the European Union ("EU"), the United States, and elsewhere, especially relating to classification of Internet Protocol addresses, machine identification, location data and other information, may limit or inhibit our ability to operate or expand our business, including limiting technology alliance partners that may involve the sharing of data. Data protection and privacy-related laws and regulations are evolving and may result in ever-increasing regulatory and public scrutiny and escalating levels of enforcement and sanctions.

For example, the EU General Data Protection Regulation ("GDPR"), which became fully effective on May 25, 2018, imposes more stringent data protection requirements than previously effective EU data protection law and provides for penalties for noncompliance of up to the greater of €20 million or four percent of worldwide annual revenues. The GDPR requires, among other things, that personal data only be transferred outside of the EU to certain jurisdictions, including the United States, if steps are taken to legitimize those data transfers. We historically have relied on the EU-U.S. and Swiss-U.S. Privacy Shield programs, and the use of model contractual clauses approved by the EU Commission, to legitimize these transfers. Both the EU-U.S. Privacy Shield and these model contractual clauses have been subject to legal challenge, however, and on July 16, 2020, the Court of Justice of the European Union ("CJEU") invalidated the U.S.-EU Privacy Shield framework that had been in place since 2016, which allowed companies like us to meet certain European legal requirements for the transfer of personal data from the European Economic Area ("EEA") to the United States, and imposed additional obligations on companies when relying on the model clauses approved by the EU Commission. This CJEU decision may result in different EEA data protection regulators applying differing standards for the transfer of personal data from the EEA to the United States, and even require ad hoc verification of measures taken with respect to data flows. The invalidation of the U.S.-EU Privacy Shield framework will require us to take additional steps to legitimize any personal data transfers that are impacted by this decision. This could result in increased costs of compliance and limitations on our customers and us. More generally, we find it necessary or desirable to modify our data handling practices, and this CJEU decision or other legal challenges relating to cross-border data transfer may serve as a basis for our personal data handling practices, or those of our customers and vendors, to be challenged and may otherwise adversely impact our business, financial condition and operating results.

Further, in June 2016, the United Kingdom ("the U.K.") voted to leave the EU, commonly referred to as "Brexit," which resulted in the U.K. exiting the EU on January 31, 2020, subject to a transition period ending December 31, 2020. "Brexit" could lead to further legislative and regulatory changes. The United Kingdom Data Protection Act that substantially implements the GDPR became law in May 2018 and was subject to statutory amendments in 2019 that further align it with the GDPR. The development of the U.K. data protection laws or regulations and regulation of data transfers to and from the U.K. in the medium to longer term, however, remain unclear.

California enacted legislation in 2018, the California Consumer Privacy Act ("CCPA"), that became operative on January 1, 2020. The CCPA requires covered companies to, among other things, provide new disclosures to California consumers, and affords such consumers new abilities to opt-out of certain sales of personal information. The CCPA is the subject of proposed regulations of the California Attorney General that have yet to be finalized. Aspects of the CCPA and its interpretation remain unclear at this time. We cannot fully predict the impact of the CCPA on our business or operations, but it may require us to modify our data processing practices and policies and to incur substantial costs and expenses in an effort to comply. Additionally, a new privacy law, the California Privacy Rights Act ("CPRA"), recently was certified by the California Secretary of State to appear on the ballot for the November 3, 2020 election. If this initiative is approved by California voters, the CPRA would significantly modify the CCPA, potentially resulting in further uncertainty and requiring us to incur additional costs and expenses.

Even the perception of privacy, data protection or information security concerns, whether or not valid, may harm our reputation, inhibit adoption of our products by current and future customers, or adversely impact our ability to hire and retain workforce talent. If our security measures are or are believed to be inadequate or breached as a result of third-party action, employee negligence, error or malfeasance, product defects, social engineering techniques or otherwise, and this results in, or is believed to result in, the disruption of the confidentiality, integrity or availability of our systems or networks or any data we process or maintain, or the loss, destruction or corruption of such data, or our privacy practices are or are perceived to be inadequate, we could incur significant liability, we could face a loss of revenues, and our business may suffer and our reputation and competitive position may be damaged. Additionally, our service providers may suffer, or be perceived to suffer, privacy or data security breaches or other incidents that may compromise, or be perceived to compromise, data stored or processed for us that may give rise to any of the foregoing.

Our actual or perceived failure to adequately comply with applicable laws and regulations, or to protect personal data and other data we process or maintain, could result in regulatory investigations and enforcement actions against us, fines, penalties and other liabilities, imprisonment of company officials and public censure, claims for damages by customers and other affected individuals, required efforts to mitigate or otherwise respond to incidents, litigation, damage to our reputation and loss of goodwill (both in relation to existing customers and prospective customers), any of which could have a material adverse effect on our operations, financial performance and business. Even the perception of privacy, data protection or information security concerns, whether or not valid, may harm our reputation and inhibit adoption of our products and subscriptions by current and future customers.

Our technology alliance partnerships expose us to a range of business risks and uncertainties that could have a material adverse impact on our business and financial results.

We have entered, and intend to continue to enter, into technology alliance partnerships with third parties to support our future growth plans. Such relationships include technology licensing, joint technology development and integration, research cooperation, co-marketing activities and sell-through arrangements. We face a number of risks relating to our technology alliance partnerships that could prevent us from realizing the desired benefits from such partnerships on a timely basis or at all, which, in turn, could have a negative impact on our business and financial results.

Technology alliance partnerships require significant coordination between the parties involved, particularly if a partner requires that we integrate its products with our products. This could involve a significant commitment of time and resources by our technical staff and their counterparts within our technology alliance partner. The integration of products from different companies may be more difficult than we anticipate, and the risk of integration difficulties, incompatible products and undetected programming errors or defects may be higher than the risks normally associated with the introduction of new products. It may also be more difficult to market and sell products developed through technology alliance partnerships than it would be to market and sell products that we develop on our own. Sales and marketing personnel may require special training, as the new products may be more complex than our other products.

We invest significant time, money and resources to establish and maintain relationships with our technology alliance partners, but we have no assurance that any particular relationship will continue for any specific period of time. Generally, our agreements with these technology alliance partners are terminable without cause with no or minimal notice or penalties. If we lose a significant technology alliance partner, we could lose the benefit of our investment of time, money and resources in the relationship. In addition, we could be required to incur significant expenses to develop a new strategic alliance or to determine and implement an alternative plan to pursue the opportunity that we targeted with the former partner.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our results of operations could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in our stock price.

The preparation of 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. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, as provided in the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations," the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. In general, if our estimates, judgments or assumptions related to our critical accounting policies change or if actual circumstances differ from our estimates, judgments or assumptions, our results of operations may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, which may result in a decline in our stock price. Significant assumptions and estimates used in preparing our consolidated financial statements include those related to assets, liabilities, revenue, expenses and related disclosures.

We are exposed to the credit risk of some of our distributors, resellers and customers and to credit exposure in weakened markets, which could result in material losses.

Most of our sales are on an open credit basis. Although we have programs in place that are designed to monitor and mitigate these risks, we cannot assure you these programs will be effective in reducing our credit risks, especially as we expand our business internationally. If we are unable to adequately control these risks, our business, results of operations and financial condition could be harmed.

If our products do not effectively interoperate with our customers' IT infrastructure, installations could be delayed or cancelled, which would harm our business.

Our products must effectively interoperate with our customers' existing or future IT infrastructure, which often has different specifications, utilizes multiple protocol standards, deploys products from multiple vendors, and contains multiple generations of products that have been added over time. As a result, when problems occur in a network, it may be difficult to identify the sources of these problems. If we find errors in the existing software or defects in the hardware used in our customers' infrastructure or problematic network configurations or settings, we may have to modify our software or hardware so that our products will interoperate with our customers' infrastructure. In such cases, our products may be unable to provide significant performance improvements for applications deployed in our customers' infrastructure. These issues could cause longer installation times for our products and could cause order cancellations, either of which would adversely affect our business, results of operations and financial condition. In addition, government and other customers may require our products to comply with certain security or other certifications and standards. If our products are late in achieving or fail to achieve compliance with these certifications and standards, or our competitors achieve compliance with these certifications and standards, we may be disqualified from selling our products to such customers, or may otherwise be at a competitive disadvantage, either of which would harm our business, results of operations, and financial condition.

Reliance on shipments at the end of each quarter could cause our revenue for the applicable period to fall below expected levels.

As a result of customer buying patterns and the efforts of our sales force and channel partners to meet or exceed their sales objectives, we have historically received a substantial portion of sales orders and generated a substantial portion of revenue during the last few weeks and days of each quarter. A significant interruption in our IT systems, which manage critical functions such as order processing, revenue recognition, financial forecasts, inventory and supply chain management, and trade compliance reviews, or our supply chain could result in delayed order fulfillment and decreased revenue for that quarter. If expected revenue at the end of any quarter is delayed for any reason, including the failure of anticipated purchase orders to materialize, our logistics or channel partners' inability to ship products prior to quarter-end to fulfill purchase orders received near the end of the quarter, our failure to manage inventory to meet demand, our inability to release new products on schedule, any failure of our systems related to order review, processing and licensing, or any delays in shipments based on trade compliance requirements (including new compliance requirements imposed by new or renegotiated trade agreements), our revenue for that quarter could fall below our expectations and the estimates of market analysts, which could adversely impact our business and results of operations and cause a decline in the trading price of our common stock.

We generate a significant amount of revenue from sales through resellers, distributors and end customers outside of the United States, and we are therefore subject to a number of risks associated with international sales and operations.

We have a limited history of marketing, selling, and supporting our platform internationally. As a result, we must hire and train experienced personnel to staff and manage our foreign operations. To the extent that we experience difficulties in recruiting, training, managing, and retaining international employees, particularly managers and other members of our international sales team, we may experience difficulties in sales productivity in, or market penetration of, foreign markets. We also enter into strategic distributor and reseller relationships with companies in certain international markets where we do not have a local presence. If we are not able to maintain successful strategic distributor relationships with our international channel partners or recruit additional channel partners, our future success in these international markets could be limited. Business practices in the international markets that we serve may differ from those in the United States and may require us to include non-standard terms in customer contracts, such as extended payment or warranty terms. To the extent that we enter into customer contracts in the future that include non-standard terms related to payment, warranties, or performance obligations, our results of operations may be adversely impacted.

Additionally, our international sales and operations are subject to a number of risks, including the following:

- greater difficulty in enforcing contracts and managing collections, as well as longer collection periods;
- higher costs of doing business internationally, including costs incurred in establishing and maintaining office space and equipment for our international operations;
- fluctuations in exchange rates between the U.S. dollar and foreign currencies in markets where we do business, such as the British Pound Sterling, which experienced a sharp decline in value compared to the U.S. dollar and other currencies;
- management communication and integration problems resulting from cultural and geographic dispersion;
- risks associated with trade restrictions and foreign legal requirements, including any importation, certification, and localization of our platform that may be required in foreign countries and any changes in trade relations and restrictions;
- greater risk of unexpected changes in foreign and domestic regulatory practices, tariffs and tax laws and treaties, including regulatory and trade policy changes adopted by the current administration;
- compliance with anti-bribery laws, including, without limitation, compliance with the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. Travel Act and the U.K. Bribery Act 2010, violations of which could lead to significant fines, penalties and collateral consequences for our Company;
- heightened risk of unfair or corrupt business practices in certain geographies and of improper or fraudulent sales arrangements that may impact financial results and result in restatements of, or irregularities in, financial statements;
- the uncertainty of protection for intellectual property rights in some countries;
- foreign exchange controls or tax regulations that might prevent us from repatriating cash earned outside the United States;
- general economic, political and social conditions in these foreign markets, including the perception of doing business with U.S. based companies and changes in regulatory requirements that impact our operating strategies, access to global markets or hiring;
- political and economic instability in some countries, such as those caused by the 2016 U.S. presidential election and the withdrawal of the United Kingdom from the European Union, commonly referred to as "Brexit";
- increased exposure to public health issues such as the current COVID-19 pandemic, and related industry and governmental actions to address these issues; and
- double taxation of our international earnings and potentially adverse tax consequences due to changes in the tax laws of the United States or the foreign jurisdictions in which we operate.

Further, the interpretation and application of international laws and regulations in many cases is uncertain, and our legal and regulatory obligations in foreign jurisdictions are subject to frequent and unexpected changes, including the potential for various regulatory or other governmental bodies to enact new or additional laws or regulations or to issue rulings that invalidate prior laws or regulations.

For example, Brexit could also lead to further legislative and regulatory changes. A Data Protection Act that substantially implements the GDPR has been implemented in the United Kingdom, effective in May 2018 and subject to additional statutory amendments in 2019 to further align such Data Protection Act with the GDPR. It is unclear, however, how United Kingdom data protection laws or regulations will develop in the medium to longer term, and how data transfers to and from the United Kingdom will be regulated. In particular, the United Kingdom’s anticipated exit from the EU to effectuate Brexit could require us to make additional changes to the way we conduct our business and transmit data from the EU into the United Kingdom.

These and other factors could harm our ability to generate future international revenue and, consequently, materially impact our business, results of operations and financial condition.

We are exposed to fluctuations in currency exchange rates, which could negatively affect our financial condition and results of operations.

Our sales contracts are denominated in U.S. dollars, and therefore our revenue is not subject to foreign currency risk. However, strengthening of the U.S. dollar increases the real cost of our products, subscriptions and services to our customers outside of the United States, which could lead to delays in the purchase of our products and services and the lengthening of our sales cycle. In addition, we are incurring an increasing portion of our operating expenses outside the United States. These expenses are denominated in foreign currencies and are subject to fluctuations due to changes in foreign currency exchange rates.

Additionally, Brexit resulted in an adverse impact to currency exchange rates, notably the British Pound Sterling which experienced a sharp decline in value compared to the U.S. dollar and other currencies. A significantly weaker British Pound Sterling compared to the U.S. dollar could have a significantly negative effect on our financial condition and results of operations.

We do not currently hedge against the risks associated with currency fluctuations but may do so in the future.

Failure to comply with governmental laws and regulations could harm our business.

Our business is subject to regulation by various U.S. federal, state, local and foreign governmental agencies, including agencies responsible for monitoring and enforcing employment and labor laws, workplace safety, product safety, environmental laws, consumer protection laws, privacy and data-protection laws, anti-bribery laws (including the U.S. Foreign Corrupt Practices Act and the U.K. Anti-Bribery Act), import/export controls, federal securities laws and tax laws and regulations. In certain jurisdictions, these regulatory requirements may be more stringent than those in the United States. Noncompliance with applicable regulations or requirements could subject us to investigations, sanctions, mandatory product recalls, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties, injunctions or other collateral consequences. If any governmental sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, results of operations, and financial condition could be materially adversely affected. In addition, responding to any action will likely result in a significant diversion of management's attention and resources and an increase in professional fees. U.S. regulations surrounding our operating activities in foreign jurisdictions are not always consistent with, and at times are in contravention to, the local regulations or laws in such jurisdictions. Enforcement actions and sanctions could harm our business, reputation, results of operations and financial condition.

We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in international markets.

Our products are subject to U.S. export controls, specifically the Export Administration Regulations and economic sanctions enforced by the Office of Foreign Assets Control. We incorporate standard encryption algorithms into our products, which, along with the underlying technology, may be exported outside of the U.S. only with the required export authorizations, including by license, license exception or other appropriate government authorizations, which may require the filing of an encryption registration and classification request. Furthermore, U.S. export control laws and economic sanctions prohibit the shipment of certain products and services to countries, governments, and persons targeted by U.S. sanctions. While we have taken precautions to prevent our products and services from being exported in violation of these laws, in certain instances in the past we shipped our encryption products prior to obtaining the required export authorizations and/or submitting the required requests, including a classification request and request for an encryption registration number, resulting in an inadvertent violation of U.S. export control laws. As a result, in February 2013, we filed a Voluntary Self Disclosure with the U.S. Department of Commerce's Bureau of Industry and Security, or BIS, concerning these potential violations. In June 2013, BIS notified us that it had completed its review of this matter and closed its review with the issuance of a warning letter. No monetary penalties were assessed. Even though we take precautions to ensure that our channel partners comply with all relevant regulations, any failure by our channel partners to comply with such regulations could have negative consequences, including reputational harm, government investigations and penalties.

In addition, various countries regulate the import of certain encryption technology, including through import permit and license requirements, and have enacted laws that could limit our ability to distribute our products or could limit our customers' ability to implement our products in those countries. Changes in our products or changes in export and import regulations may create delays in the introduction of our products into international markets, prevent our customers with international operations from deploying our products globally or, in some cases, prevent the export or import of our products to certain countries, governments or persons altogether. Any change in export or import regulations, economic sanctions or related legislation, shift in the enforcement or scope of existing regulations, or change in the countries, governments, persons or technologies targeted by such regulations, could result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or potential customers with international operations. Any decreased use of our products or limitation on our ability to export to or sell our products in international markets would likely adversely affect our business, financial condition and results of operations.

Our business is subject to the risks of earthquakes, fire, power outages, floods and other catastrophic events, and to interruption by man-made problems such as terrorism or armed conflicts.

Natural disasters or other catastrophic events, including earthquakes, fires, floods, significant power outages, telecommunications failures, outbreak of pandemic or contagious diseases (including, but not limited to, the current COVID-19 pandemic) and cyber attacks, may cause damage or disruption to our operations, international commerce and the global economy, and thus could have a material adverse impact on our business, results of operations, and financial condition. Our corporate headquarters and servers hosting our cloud services are located in California, a region known for seismic activity. Customer data could be lost, significant recovery time could be required to resume operations and our financial condition and operating results could be adversely affected in the event of a natural disaster or other catastrophic event. In addition, natural disasters and other catastrophic events could affect our supply chain, manufacturing vendors, or logistics providers' ability to provide materials and perform services such as manufacturing products or assisting with shipments on a timely basis. In the event that our or our service providers' information technology systems or manufacturing or logistics abilities are hindered by any of the events discussed above, shipments could be delayed, resulting in missed financial targets, such as revenue and shipment targets, for a particular quarter. In addition, acts of terrorism, armed conflicts and other geo-political unrest could cause disruptions in our business or the business of our supply chain, manufacturers, logistics providers, partners, or customers or the economy as a whole. Any disruption in the business of our supply chain, manufacturers, logistics providers, partners or end-customers that impacts sales at the end of a fiscal quarter could have a significant adverse impact on our financial results. All of the aforementioned risks may be further increased if the disaster recovery plans for us and our suppliers prove to be inadequate. To the extent that any of the above should result in delays or cancellations of customer orders, the loss of customers or the delay in the manufacture, deployment or shipment of our products, our business, financial condition and results of operations would be adversely affected.

If we fail to comply with environmental requirements, our business, financial condition, results of operations and reputation could be adversely affected.

We are subject to various environmental laws and regulations including laws governing the hazardous material content of our products and laws relating to the collection and recycling of electrical and electronic equipment. Examples of these laws and regulations include the EU Restrictions on the Use of certain Hazardous Substances in Electronic Equipment Directive and the EU Waste Electrical and Electronic Equipment Directive as well as the implementing legislation of the EU member states. Similar laws and regulations have been passed or are pending in China, South Korea and Japan and may be enacted in other regions, including in the United States, and we are, or may in the future be, subject to these laws and regulations.

Our failure to comply with past, present, and future laws could result in reduced sales of our products, substantial product inventory write-offs, reputational damage, penalties, and other sanctions, any of which could harm our business and financial condition. We also expect that our products will be affected by new environmental laws and regulations on an ongoing basis. To date, our expenditures for environmental compliance have not had a material impact on our results of operations or cash flows, and although we cannot predict the future impact of such laws or regulations, they will likely result in additional costs and may increase penalties associated with violations or require us to change the content of our products or how they are manufactured, which could have a material adverse effect on our business, results of operations and financial condition.

If we do not achieve increased tax benefits as a result of our corporate structure, our operating results and financial condition may be negatively impacted.

We generally conduct our international operations through wholly-owned subsidiaries and report our taxable income in various jurisdictions worldwide based upon our business operations in those jurisdictions. In 2019, we reorganized our corporate structure and intercompany relationships to better align our corporate organization with the expansion of our international business activities. Although we anticipate achieving a reduction in our overall effective tax rate in the future as a result of this reorganized corporate structure, we may not realize any benefits. Our intercompany relationships are subject to complex transfer pricing regulations administered by taxing authorities in various jurisdictions. The relevant taxing authorities may disagree with our determinations as to the income and expenses attributable to specific jurisdictions. If such a disagreement were to occur, and our position were not sustained, we could be required to pay additional taxes, interest and penalties, which could result in one-time tax charges, higher effective tax rates, reduced cash flows and lower overall profitability of our operations. In addition, if the intended tax treatment of our reorganized corporate structure is not accepted by the applicable taxing authorities, changes in tax law negatively impact the structure or we do not operate our business consistent with the structure and applicable tax laws and regulations, we may fail to achieve any tax advantages as a result of the reorganized corporate structure, and our future operating results and financial condition may be negatively impacted. In addition, we continue to evaluate our corporate structure in light of current and pending tax legislation, and any changes to our corporate structure may require us to incur additional expenses and may impact our overall effective tax rate.

We could be subject to additional tax liabilities.

We are subject to U.S. federal, state, local and sales taxes in the United States and foreign income taxes, withholding taxes and transaction taxes in numerous foreign jurisdictions. Significant judgment is required in evaluating our tax positions and our worldwide provision for taxes. During the ordinary course of business, there are many activities and transactions for which the ultimate tax determination is uncertain. In addition, our tax obligations and effective tax rates could be adversely affected by changes in the relevant tax, accounting and other laws, regulations, principles and interpretations, including those relating to income tax nexus and impacts of the Tax Cuts and Jobs Act of 2017 (the “Tax Act”), as modified by the CARES Act, by recognizing tax losses or lower than anticipated earnings in jurisdictions where we have lower statutory rates and higher than anticipated earnings in jurisdictions where we have higher statutory rates, by changes in foreign currency exchange rates, or by changes in the valuation of our deferred tax assets and liabilities. We may be audited in various jurisdictions, and such jurisdictions may assess additional taxes, sales taxes and value-added taxes against us. Although we believe our tax estimates are reasonable, the final determination of any tax audits or litigation could be materially different from our historical tax provisions and accruals, which could have a material adverse effect on our operating results or cash flows in the period for which a determination is made.

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

In general, under Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"), a corporation that undergoes an “ownership change” is subject to limitations on its ability to utilize its pre-change net operating losses, or NOLs, to offset future taxable income. Our existing NOLs may be subject to limitations arising from previous ownership changes. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Code and adversely affect our ability to utilize our NOLs in the future. Furthermore, our ability to utilize NOLs of companies that we may acquire in the future may be subject to limitations. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs, or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to offset future income tax liabilities. For example, the Tax Act, as modified by the CARES Act, changed certain limitations on our ability to use our federal NOLs, and California recently enacted legislation limiting our ability to use our state NOLs for taxable years 2020, 2021, and 2022. For these reasons, we may not be able to utilize a material portion of the NOLs reflected on our balance sheet, even if we attain profitability.

Risks Related to Our Convertible Senior Notes

We are leveraged financially, which could adversely affect our ability to adjust our business to respond to competitive pressures and to obtain sufficient funds to satisfy our future growth, business needs and development plans.

We have substantial existing indebtedness. In June 2015, we issued $460.0 million principal amount of 1.000% Convertible Senior Notes due 2035 (the "Series A Notes") and $460.0 million principal amount of 1.625% Convertible Senior Notes due 2035 (the "Series B Notes" and, together with the Series A Notes, the "2035 Notes"). During the three months ended June 30, 2018, we issued $600.0 million aggregate principal amount of 0.875% Convertible Senior Notes due 2024 (the "2024 Notes" and, together with the 2035 Notes, the "convertible notes") and repurchased approximately $340.2 million aggregate principal amount of the Series A Notes. During the three months ended June 30, 2020, we repurchased approximately $96.4 million aggregate principal amount of the Series A Notes. As a result, as of June 30, 2020, we had approximately $1.1 billion aggregate principal amount of convertible notes outstanding.

The degree to which we are leveraged could have negative consequences, including, but not limited to, the following:

- we may be more vulnerable to economic downturns, less able to withstand competitive pressures and less flexible in responding to changing business and economic conditions;
- our ability to obtain additional financing in the future for working capital, capital expenditures, acquisitions, general corporate or other purposes may be limited;
- a substantial portion of our cash flows from operations in the future may be required for the payment of the principal amount of our existing indebtedness when it becomes due; and
- we may elect to make cash payments upon any conversion of the convertible notes, which would reduce our cash on hand.

Our ability to meet our payment obligations under our convertible notes depends on our ability to generate significant cash flow in the future. This, to some extent, is subject to general economic, financial, competitive, legislative, and regulatory factors as well as other factors that are beyond our control. There can be no assurance that our business will generate cash flow from operations, or that additional capital will be available to us, in an amount sufficient to enable us to meet our debt payment obligations and to fund other liquidity needs. If we are unable to generate sufficient cash flow to service our debt obligations, we may need to refinance or restructure our debt, sell assets, reduce or delay capital investments, or seek to raise additional capital. If we were unable to implement one or more of these alternatives, we may be unable to meet our debt payment obligations, which could have a material adverse effect on our business, results of operations, or financial condition.

If holders of the 2035 Notes require us to repurchase their notes on any repurchase date, our financial condition and operating results could be adversely affected.

Holders of the Series A Notes have the right to require us to repurchase their notes on each of June 1, 2025 and June 1, 2030, and holders of the Series B Notes will have the right to require us to repurchase their notes on each of June 1, 2022, June 1, 2025 and June 1, 2030 at a repurchase price equal to 100% of the principal amount of the notes of the relevant series to be repurchased, plus accrued and unpaid interest, if any, to, but excluding, the relevant repurchase date pursuant to the applicable indenture governing such series of notes. If holders require us to repurchase their notes of an applicable series on an applicable repurchase date, our financial condition and operating results could be adversely affected.

The conditional conversion feature of each series of convertible notes, if triggered, may adversely affect our financial condition and operating results.

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

The accounting method for convertible debt securities that may be settled in cash, such as the convertible notes, is subject to changes that could have a material effect on our reported financial results.

In May 2008, the Financial Accounting Standards Board, which we refer to as FASB, issued FASB Staff Position No. APB 14-1, Accounting for Convertible Debt Instruments That May Be Settled in Cash Upon Conversion (Including Partial Cash Settlement), which has subsequently been codified as Accounting Standards Codification 470-20, Debt with Conversion and Other Options, which we refer to as ASC 470-20. Under ASC 470-20, an entity must separately account for the liability and equity components of the convertible debt instruments (such as the convertible notes) that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer’s economic interest cost. The effect of ASC 470-20 on the accounting for each series of convertible notes is that the equity component is required to be included in the additional paid-in capital section of stockholders’ equity on our consolidated balance sheet and the value of the equity component would be treated as original issue discount for purposes of accounting for the debt component of such series of convertible notes. As a result, we will be required to record a greater amount of non-cash interest expense in current periods presented as a result of the amortization of the discounted carrying value of the convertible notes to their face amount over the term of the convertible notes. We will report lower net income in our financial results because ASC 470-20 will require interest to include both the current period’s amortization of the debt discount and the instrument’s non-convertible coupon interest for such series of convertible notes, which could adversely affect our reported or future financial results and the trading price of our common stock.

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments (a consensus of the Emerging Issues Task Force). This standard clarifies how certain cash receipts and payments should be classified in the statement of cash flows, including the cash settlement for each series of our convertible notes. Upon cash settlement, repayment of the principal amount will be bifurcated between cash outflows for operating activities for the portion related to accreted interest attributable to debt discounts arising from the difference between the coupon interest rate and the effective interest rate, and financing activities for the remainder. This will require us to classify the $310.4 million of accreted interest as cash used in operating activities in our consolidated financial statements upon cash settlement, which could adversely affect our future cash flow from operations.

In addition, under certain circumstances, convertible debt instruments (such as the convertible notes) that may be settled entirely or partly in cash are currently accounted for utilizing the treasury stock method, the effect of which is that any shares issuable upon conversion of any series of convertible notes are not included in the calculation of diluted earnings per share except to the extent that the conversion value of such series of convertible notes exceeds their principal amount of such series of convertible notes. Under the treasury stock method, for diluted earnings per share purposes, the transaction is accounted for as if the number of shares of common stock that would be necessary to settle such excess conversion value, if we elected to settle such excess in shares, are issued. We cannot be sure that the accounting standards in the future will continue to permit the use of the treasury stock method. If we are unable to use the treasury stock method in accounting for the shares issuable upon conversion of the convertible notes, then our diluted earnings per share would be adversely affected.

Transactions related to our convertible notes may affect the market price of our common stock.

The conversion of any of our series of convertible notes, if such conversion occurs, will dilute the ownership interests of then-existing stockholders to the extent we deliver shares upon conversion of any of the convertible notes. Any sales in the public market of the common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the convertible notes may encourage short selling by market participants because any conversion of the convertible notes could be used to satisfy short positions, or anticipated conversion of the convertible notes into shares of our common stock could depress the price of our common stock.

In addition, in connection with our issuance of the 2024 Notes, we entered into capped call transactions (the "capped call transactions") with certain financial institutions (the “option counterparties”). The capped call transactions are expected generally to reduce the potential dilution to our common stock upon any conversion of the 2024 Notes and/or offset any cash payments we are required to make in excess of the principal amount of such 2024 Notes converted, as the case may be, with such reduction and/or offset subject to a cap. From time to time, the option counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various derivative transactions with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the 2024 Notes. This activity could cause a decrease in the market price of our common stock.

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

The option counterparties to our capped call transactions are financial institutions, and we will be subject to the risk that one or more of the counterparties may default or otherwise fail to perform, or may exercise certain rights to terminate, their obligations under the capped call transactions. Our exposure to the credit risk of the option counterparties will not be secured by any collateral. Adverse global economic conditions may result in the actual or perceived failure or financial difficulties for financial institutions, including one or more of our option counterparties. If an option counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at that time under our transactions with that option counterparty. Our exposure will depend on many factors but, generally, our exposure will increase if the market price or the volatility of our common stock increases. In addition, upon a default or other failure to perform, or a termination of obligations, by an option counterparty, we may suffer adverse tax consequences and more dilution than we currently anticipate with respect to our common stock. We can provide no assurances as to the financial stability or viability of the option counterparties.

Risks Related to Ownership of Our Common Stock

If securities or industry analysts do not publish research or reports about our business, or publish inaccurate or unfavorable research reports about our business, our share price and trading volume could decline.

The trading market for our common stock, to some extent, depends on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us should downgrade our shares or change their opinion of our shares, industry sector or products, our share price would likely decline. If one or more of these analysts ceases coverage of our Company or fails to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

We may fail to meet our publicly announced guidance or other expectations about our business and future operating results, which would cause our stock price to decline.

We have provided and may continue to provide guidance about our business and future operating results. In developing this guidance, our management must make certain assumptions and judgments about our future performance. Furthermore, analysts and investors may develop and publish their own projections of our business, which may form a consensus about our future performance. Our business results may vary significantly from such guidance or that consensus due to a number of factors, many of which are outside of our control, and which could adversely affect our operations and operating results. Such factors may include the possibility that interpretation, industry practice, and accounting guidance may continue to evolve during the early stages of adoption of Accounting Standard Update 2014-09, Revenue from Contracts with Customers (Topic 606). Furthermore, if we make downward revisions of our previously announced guidance, or if our publicly announced guidance of future operating results fails to meet expectations of securities analysts, investors or other interested parties, the price of our common stock would decline.

The price of our common stock has been and may continue to be volatile, and the value of your investment could decline.

The trading price of our common stock has been volatile since our initial public offering, and is likely to continue to be volatile. The trading price of our common stock may fluctuate widely in response to various factors, some of which are beyond our control. These factors include:

- whether our results of operations, and in particular, our revenue growth rates, meet the expectations of securities analysts or investors;
- actual or anticipated changes in the expectations of investors or securities analysts, whether as a result of our forward-looking statements, our failure to meet such expectation or otherwise;
- announcements of new products, services or technologies, commercial relationships, acquisitions or other events by us or our competitors;

- changes in how customers perceive the effectiveness of our platform in protecting against advanced cyber attacks or other reputational harm;
- publicity concerning cyber attacks in general or high profile cyber attacks against specific organizations;
- price and volume fluctuations in the overall stock market from time to time;
- significant volatility in the market price and trading volume of technology and/or growth companies in general and of companies in the IT security industry in particular;
- fluctuations in the trading volume of our shares or the size of our public float;
- actual or anticipated changes or fluctuations in our results of operations;
- litigation involving us, our industry, or both;
- regulatory developments in the United States, foreign countries or both;
- general economic conditions and trends;
- natural disasters or other catastrophic events;
- public health crises and related measures to protect the public health, such as the COVID-19 pandemic;
- actual or perceived security breaches that we or our service providers may suffer;
- sales of large blocks of our common stock or substantial future sales by our directors, executive officers, employees and significant stockholders; and
- departures of key personnel.

In addition, if the market for technology stocks or the stock market in general experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, results of operations or financial condition. The trading price of our common stock might also decline in reaction to events that affect other companies in our industry even if these events do not directly affect us. In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been brought against that company. The price of our common stock has been highly volatile since our IPO in September 2013, and beginning in June 2014, several lawsuits alleging violations of securities laws were filed against us and certain of our current and former directors and executive officers. Any securities litigation could result in substantial costs and divert our management's attention and resources from our business. This could have a material adverse effect on our business, results of operations and financial condition.

Sales of substantial amounts of our common stock in the public markets, or sales of our common stock by our executive officers and directors under Rule 10b5-1 plans, could adversely affect the market price of our common stock.

Sales of a substantial number of shares of our common stock in the public market, or the perception that such sales could occur, could adversely affect the market price of our common stock and may make it more difficult for you to sell your common stock at a time and price that you deem appropriate. In addition, certain of our executive officers and directors have adopted, and other executive officers and directors may in the future adopt, written plans, known as "Rule 10b5-1 Plans," under which they have contracted, or may in the future contract, with a broker to sell shares of our common stock on a periodic basis to diversify their assets and investments. Sales made by our executive officers and directors pursuant to Rule 10b5-1, regardless of the amount of such sales, could adversely affect the market price of our common stock.

The issuance of additional stock in connection with financings, acquisitions, investments, our stock incentive plans, conversion of our convertible notes or otherwise will dilute all other stockholders.

Our amended and restated certificate of incorporation authorizes us to issue up to 1,000,000,000 shares of common stock and up to 100,000,000 shares of preferred stock with such rights and preferences as may be determined by our board of directors. Subject to compliance with applicable rules and regulations, we may issue shares of common stock or securities convertible into our common stock from time to time in connection with a financing, acquisition, investment, our stock incentive plans, the conversion of our convertible notes or otherwise. For example, in October 2017, we issued 259,425 shares of common stock in connection with our acquisition of The Email Laundry; in January 2018, we issued 1,016,334 shares of common stock in connection with our acquisition of X15; and in May 2019, we issued 8,404,609 shares of common stock in connection with our acquisition of Verodin. In addition, we issued $920.0 million aggregate principal amount of 2035 Notes, of which approximately $483.4 million aggregate principal remains outstanding, and we issued $600.0 million aggregate principal amount of the 2024 Notes during the three months ended June 30, 2018. Any future issuances could result in substantial dilution to our existing stockholders and cause the trading price of our common stock to decline.

We do not intend to pay dividends for the foreseeable future.

We have never declared or paid any dividends on our common stock. We intend to retain any earnings to finance the operation and expansion of our business, and we do not anticipate paying any cash dividends in the future. As a result, you may only receive a return on your investment in our common stock if the market price of our common stock increases.

The requirements of being a public company may strain our resources, divert management’s attention and affect our ability to attract and retain qualified board members.

As a public company, we are subject to the reporting requirements of the Exchange Act, the listing requirements of the NASDAQ Stock Market and other applicable securities rules and regulations. Compliance with these rules and regulations has increased and will continue to increase our legal and financial compliance costs, has made and will continue to make some activities more difficult, time-consuming or costly, and has increased and will continue to increase demand on our systems and resources. Among other things, the Exchange Act requires that we file annual, quarterly and current reports with respect to our business and results of operations and maintain effective disclosure controls and procedures and internal control over financial reporting. In order to maintain and, if required, improve our disclosure controls and procedures and internal control over financial reporting to meet this standard, significant resources and management oversight may be required. As a result, management’s attention may be diverted from other business concerns, which could harm our business and results of operations. Although we have already hired additional employees to comply with these requirements, we may need to hire even more employees in the future, which will increase our costs and expenses.

We are subject to the independent auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act ("Section 404"), enhanced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. While we were able to determine in our management's report for fiscal 2019 that our internal control over financial reporting is effective, as well as provide an unqualified attestation report from our independent registered public accounting firm to that effect, we have and will continue to consume management resources and incur significant expenses for Section 404 compliance on an ongoing basis. In the event that our Chief Executive Officer, Chief Financial Officer, or independent registered public accounting firm determines in the future that our internal control over financial reporting is not effective as defined under Section 404, we could be subject to one or more investigations or enforcement actions by state or federal regulatory agencies, stockholder lawsuits or other adverse actions requiring us to incur defense costs, pay fines, settlements or judgments and causing investor perceptions to be adversely affected and potentially resulting in a decline in the market price of our stock.

In addition, changing laws, regulations and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs, and making some activities more time consuming. These laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations, and standards, and this investment will increase our general and administrative expense and a diversion of management’s time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new laws, regulations, and standards are unsuccessful, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

We also expect that these new rules and regulations will make it more expensive for us to obtain and maintain director and officer liability insurance, and in the future, we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified executive officers and members of our board of directors, particularly to serve on our audit committee and compensation committee.

In addition, as a result of our disclosure obligations as a public company, we have reduced strategic flexibility and are under pressure to focus on short-term results, which may adversely impact our ability to achieve long-term profitability.

We are obligated to maintain proper and effective internal control over financial reporting. We may not complete our analysis of our internal control over financial reporting in a timely manner, or this internal control may not be determined to be effective, which may adversely affect investor confidence in our Company and, as a result, the value of our common stock.

We are required, pursuant to the Exchange Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting, as well as a statement that our auditors have issued an attestation report on our internal controls.

While we were able to determine in our management's report for fiscal 2019 that our internal control over financial reporting is effective, as well as provide an unqualified attestation report from our independent registered public accounting firm to that effect, we may not be able to complete our evaluation, testing, and any required remediation in a timely fashion or our independent registered public accounting firm may not be able to formally attest to the effectiveness of our internal control over financial reporting in the future. During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting that we are unable to remediate before the end of the same fiscal year in which the material weakness is identified, we will be unable to assert that our internal controls are effective. If we are unable to assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to attest to the effectiveness of our internal controls or determine we have a material weakness in our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our common stock to decline.

Our charter documents and Delaware law, as well as certain provisions of our convertible notes, could discourage takeover attempts and lead to management entrenchment, which could also reduce the market price of our common stock.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could delay or prevent a change in control of our Company. These provisions could also make it difficult for stockholders to elect directors who are not nominated by the current members of our board of directors or take other corporate actions, including effecting changes in our management. These provisions include:

- a classified board of directors with three-year staggered terms, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- the ability of our board of directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by our board of directors, the chairperson of our board of directors, our Chief Executive Officer or our President (in the absence of a Chief Executive Officer), which could delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- the requirement for the affirmative vote of holders of at least $66\,^2/_3\%$ of the voting power of all of the then outstanding shares of the voting stock, voting together as a single class, to amend the provisions of our amended and restated certificate of incorporation relating to the management of our business (including our classified board structure) or certain provisions of our amended and restated bylaws, which may inhibit the ability of an acquiror to effect such amendments to facilitate an unsolicited takeover attempt;
- the ability of our board of directors to amend the bylaws, which may allow our board of directors to take additional actions to prevent an unsolicited takeover and inhibit the ability of an acquiror to amend the bylaws to facilitate an unsolicited takeover attempt; and
- advance notice procedures with which stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law, which may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a specified period of time. Additionally, certain provisions of our convertible notes could make it more difficult or more expensive for a third party to acquire us. The application of Section 203 or certain provisions of our convertible notes also could have the effect of discouraging, delaying or preventing a transaction involving a change in control of us. Any of these provisions could, under certain circumstances, depress the market price of our common stock.

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

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit No.	Description of Exhibit
31.1	Rule 13a-14(a) / 15(d)-14(a) Certification of Principal Executive Officer
31.2	Rule 13a-14(a) / 15(d)-14(a) Certification of Principal Financial Officer
32.1*	Section 1350 Certifications
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Furnished herewith.

SIGNATURE

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.

FIREEYE, INC.

Dated: July 31, 2020	By:	/s/ Frank E. Verdecanna
		Frank E. Verdecanna
		Executive Vice President, Chief Financial Officer and Chief Accounting Officer *(Principal Financial and Accounting Officer and duly authorized signatory)*

Exhibit 31.1

CERTIFICATION

I, Kevin R. Mandia, certify that:

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

Date: July 31, 2020

/s/ Kevin R. Mandia

Kevin R. Mandia
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Frank E. Verdecanna, certify that:

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

Date: July 31, 2020

/s/ Frank E. Verdecanna

Frank E. Verdecanna

Executive Vice President, Chief Financial Officer and Chief Accounting Officer

(Principal Financial and Accounting Officer)

Exhibit 32.1

SECTION 1350 CERTIFICATIONS

I, Kevin R. Mandia, certify to the best of my knowledge, pursuant to 18 U.S.C. Section 1350, that the Quarterly Report of FireEye, Inc. on Form 10-Q for the quarterly period ended June 30, 2020 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 Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of FireEye, Inc.

Date: July 31, 2020	/s/ Kevin R. Mandia
	Kevin R. Mandia
	Chief Executive Officer
	(Principal Executive Officer)

I, Frank E. Verdecanna, certify to the best of my knowledge, pursuant to 18 U.S.C. Section 1350, that the Quarterly Report of FireEye, Inc. on Form 10-Q for the quarterly period ended June 30, 2020 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 Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of FireEye, Inc.

Date: July 31, 2020	/s/ Frank E. Verdecanna
	Frank E. Verdecanna
	Executive Vice President, Chief Financial Officer and Chief Accounting Officer
	(Principal Financial and Accounting Officer)