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 April 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: 001-35394

Guidewire Software, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**36-4468504**
(State or other jurisdiction of Incorporation or organization)	**(I.R.S. Employer Identification No.)**
2850 S. Delaware St., Suite 400 San Mateo, California	**94403**
(Address of principal executive offices)	**(Zip Code)**

(650) 357-9100
(Registrant's telephone number, including area code)

N/A
(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 par value	GWRE	New York Stock Exchange

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

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

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

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

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

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

On May 29, 2020, the registrant had 83,179,954 shares of common stock issued and outstanding.

Guidewire Software, Inc.

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FORWARD-LOOKING STATEMENTS

The section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" as well as other parts of this Quarterly Report on Form 10-Q and certain information incorporated herein by reference contain forward-looking statements within the meaning of the Securities Act of 1933 and the Securities Exchange Act of 1934, which are subject to risks and uncertainties. The forward-looking statements may include statements concerning, among other things, our business strategy (including anticipated trends and developments in, and management plans for, our business and the markets in which we operate), financial results, results of operations, revenue, gross margins, operating expenses, products, projected costs and capital expenditures, research and development programs, sales and marketing initiatives, and competition. In some cases, you can identify these statements by forward-looking words, such as "will," "may," "might," "should," "could," "estimate," "expect," "suggest," "believe," "anticipate," "intend," "plan," and "continue," the negative or plural of these words and other comparable terminology. Actual events or results may differ materially from those expressed or implied by these statements due to various factors, including but not limited to the matters discussed below, in the section titled "Part II - Other Information - Item 1A. Risk Factors," and elsewhere in this Quarterly Report on Form 10-Q. Many of the forward-looking statements are located in "Management's Discussion and Analysis of Financial Condition and Results of Operations." Examples of forward-looking statements include statements regarding:

- *growth prospects of the property & casualty ("P&C") insurance industry and our company;*
- *the developing market for subscription services and uncertainties attendant on emerging sales and delivery models, including the migration of our existing term license customers to subscriptions services;*
- *trends in and timing of future sales, including the mix between licensing and subscription models and seasonality;*
- *our competitive environment and changes thereto;*
- *competitive attributes of our software applications and delivery models;*
- *the timing and number of professional services engagements and the billing rates and utilization of our professional services employees and contractors;*
- *challenges to further increase sales outside of the United States;*
- *our research and development and cloud operations investment and efforts;*
- *expenses to be incurred, and benefits to be achieved from our acquisitions;*
- *our gross and operating margins and factors that affect such margins, including costs related to operating, securing and enhancing our subscription services;*
- *our provision for tax liabilities, judgments related to revenue recognition, and other critical accounting estimates;*
- *the impact of new accounting standards and any contractual changes we have made in anticipation of such changes;*
- *our exposure to market risks, including geographical and political events that may negatively impact our customers or our business operations;*
- *the effect of uncertainties related to the global COVID-19 pandemic on U.S. and global economies, our business, our employees, results of operations, financial condition, demand for our products, sales and implementation cycles, and the health of our customers' and partners' businesses; and*
- *our ability to satisfy future liquidity requirements.*

Forward-looking statements are not guarantees of future performance and involve risks and uncertainties. The forward-looking statements contained in this Quarterly Report on Form 10-Q are based on information available to us as of the filing date of this Quarterly Report on Form 10-Q and our current expectations about future events, which are inherently subject to change and involve risks and uncertainties. You should not place undue reliance on these forward-looking statements.

We do not undertake any obligation to update any forward-looking statements in this report or in any of our other communications, except as required by law. All such forward-looking statements should be read as of the time the statements were made and with the recognition that these forward-looking statements may not be complete or accurate at a later date.

Unless the context requires otherwise, we are referring to Guidewire Software, Inc. together with its subsidiaries when we use the terms "Guidewire," the "Company," "we," "our," or "us."

PART I – Financial Information

ITEM 1. Financial Statements (unaudited)

GUIDEWIRE SOFTWARE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(unaudited, in thousands)

	April 30, 2020	July 31, 2019
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 293,815	$ 254,101
Short-term investments	740,386	870,136
Accounts receivable, net of allowances of $1,146 and $1,441, respectively	79,587	138,443
Unbilled accounts receivable, net	68,913	36,728
Prepaid expenses and other current assets	41,598	35,566
Total current assets	1,224,299	1,334,974
Long-term investments	291,760	213,524
Unbilled accounts receivable, net	21,930	9,375
Property and equipment, net	65,461	65,809
Operating lease assets	85,902	—
Intangible assets, net	46,031	66,542
Goodwill	340,877	340,877
Deferred tax assets, net	100,925	90,308
Other assets	31,683	45,554
TOTAL ASSETS	$ 2,208,868	$ 2,166,963
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 18,348	$ 34,255
Accrued employee compensation	47,493	73,365
Deferred revenue, net	89,087	108,304
Other current liabilities	21,789	16,348
Total current liabilities	176,717	232,272
Lease liabilities	99,110	—
Convertible senior notes, net	326,920	317,322
Deferred revenue, net	17,009	23,527
Other liabilities	3,099	19,641
Total liabilities	622,855	592,762
STOCKHOLDERS' EQUITY:		
Common stock	8	8
Additional paid-in capital	1,471,340	1,391,904
Accumulated other comprehensive income (loss)	(9,516)	(7,758)
Retained earnings	124,181	190,047
Total stockholders' equity	1,586,013	1,574,201
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 2,208,868	$ 2,166,963

See accompanying Notes to Condensed Consolidated Financial Statements.

GUIDEWIRE SOFTWARE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited, in thousands except shares and per share amounts)

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2020	**2019**	**2020**	**2019**
Revenue:				
License and subscription	$ 93,182	$ 76,218	$ 280,559	$ 257,611
Maintenance	20,694	21,335	62,781	63,602
Services	54,289	65,314	155,293	190,443
Total revenue	168,165	162,867	498,633	511,656
Cost of revenue:				
License and subscription	28,713	15,781	79,541	43,850
Maintenance	4,375	3,924	12,153	11,746
Services	52,664	60,573	158,510	185,970
Total cost of revenue	85,752	80,278	250,204	241,566
Gross profit:				
License and subscription	64,469	60,437	201,018	213,761
Maintenance	16,319	17,411	50,628	51,856
Services	1,625	4,741	(3,217)	4,473
Total gross profit	82,413	82,589	248,429	270,090
Operating expenses:				
Research and development	51,893	47,102	148,343	139,069
Sales and marketing	35,235	33,301	105,590	96,793
General and administrative	20,885	17,953	62,723	53,839
Total operating expenses	108,013	98,356	316,656	289,701
Income (loss) from operations	(25,600)	(15,767)	(68,227)	(19,611)
Interest income	6,072	7,748	20,666	22,152
Interest expense	(4,505)	(4,327)	(13,396)	(12,858)
Other income (expense), net	(12,356)	(617)	(12,789)	(958)
Income (loss) before provision for (benefit from) income taxes	(36,389)	(12,963)	(73,746)	(11,275)
Provision for (benefit from) income taxes	(5,351)	(4,382)	(7,773)	(9,002)
Net income (loss)	$ (31,038)	$ (8,581)	$ (65,973)	$ (2,273)
Net income (loss) per share:				
Basic	$ (0.37)	$ (0.11)	$ (0.80)	$ (0.03)
Diluted	$ (0.37)	$ (0.11)	$ (0.80)	$ (0.03)
Shares used in computing net income (loss) per share:				
Basic	83,024,291	81,606,088	82,701,267	81,252,993
Diluted	83,024,291	81,606,088	82,701,267	81,252,993

See accompanying Notes to Condensed Consolidated Financial Statements.

GUIDEWIRE SOFTWARE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(unaudited, in thousands)

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2020	**2019**	**2020**	**2019**
Net income (loss)	$ (31,038)	$ (8,581)	$ (65,973)	$ (2,273)
Other comprehensive income (loss):				
Foreign currency translation adjustments	(2,710)	(983)	(2,999)	(1,560)
Unrealized gains (losses) on available-for-sale securities	342	889	1,504	2,174
Tax benefit (expense) on unrealized gains (losses) on available-for-sale securities	(142)	(185)	(422)	(426)
Reclassification adjustment for realized gains (losses) included in net income (loss)	253	(111)	266	(384)
Total other comprehensive income (loss)	(2,257)	(390)	(1,651)	(196)
Comprehensive income (loss)	$ (33,295)	$ (8,971)	$ (67,624)	$ (2,469)

See accompanying Notes to Condensed Consolidated Financial Statements

GUIDEWIRE SOFTWARE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(unaudited, in thousands except share amounts)

	Common stock		Additional paid-in capital	Accumulated other comprehensive income (loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount				
Balance as of July 31, 2019	**82,140,883**	**$ 8**	**$ 1,391,904**	**$ (7,758)**	**$ 190,047**	**$ 1,574,201**
Net income (loss)	—	—	—	—	(14,991)	(14,991)
Issuance of common stock upon exercise of stock options	21,698	—	368	—	—	368
Issuance of common stock upon vesting of Restricted Stock Units ("RSUs")	411,825	—	—	—	—	—
Stock-based compensation	—	—	24,765	—	—	24,765
Foreign currency translation adjustment	—	—	—	133	—	133
Unrealized gain (loss) on available-for-sale securities, net of tax	—	—	—	1,003	—	1,003
Reclassification adjustment for realized gain (loss) on available-for-sale securities, included in net income (loss)	—	—	—	46	—	46
Adoption of Accounting Standards Update ("ASU") 2018-02	—	—	—	(107)	107	—
Balance as of October 31, 2019	**82,574,406**	**$ 8**	**$ 1,417,037**	**$ (6,683)**	**$ 175,163**	**$ 1,585,525**
Net income (loss)	—	—	—	—	(19,944)	(19,944)
Issuance of common stock upon exercise of stock options	25,155	—	872	—	—	872
Issuance of common stock upon vesting of RSUs	272,821	—	—	—	—	—
Stock-based compensation	—	—	26,688	—	—	26,688
Foreign currency translation adjustment	—	—	—	(422)	—	(422)
Unrealized gain (loss) on available-for-sale securities, net of tax	—	—	—	(121)	—	(121)
Reclassification adjustment for realized gain (loss) on available-for-sale securities, included in net income (loss)	—	—	—	(33)	—	(33)
Balance as of January 31, 2020	**82,872,382**	**$ 8**	**$ 1,444,597**	**$ (7,259)**	**$ 155,219**	**$ 1,592,565**
Net income (loss)	—	—	—	—	(31,038)	(31,038)
Issuance of common stock upon exercise of stock options	41,475	—	1,838	—	—	1,838
Issuance of common stock upon vesting of RSUs	253,185	—	—	—	—	—
Stock-based compensation	—	—	24,905	—	—	24,905
Foreign currency translation adjustment	—	—	—	(2,710)	—	(2,710)
Unrealized gain (loss) on available-for-sale securities, net of tax	—	—	—	200	—	200
Reclassification adjustment for realized gain (loss) on available-for-sale securities, included in net income (loss)	—	—	—	253	—	253
Balance as of April 30, 2020	**83,167,042**	**$ 8**	**$ 1,471,340**	**$ (9,516)**	**$ 124,181**	**$ 1,586,013**

	Common stock		Additional paid-in capital	Accumulated other comprehensive income (loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount				
Balance as of July 31, 2018	**80,611,698**	**$ 8**	**$ 1,296,380**	**$ (7,748)**	**$ 124,976**	**$ 1,413,616**
Net income (loss)	—	—	—	—	6,309	6,309
Issuance of common stock upon exercise of stock options	74,698	—	689	—	—	689
Issuance of common stock upon vesting of RSUs	372,079	—	—	—	—	—
Stock-based compensation	—	—	23,210	—	—	23,210
Cancellation of common stock issued as part of Cyence acquisition	(48,968)	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	(812)	—	(812)
Unrealized gain (loss) on available-for-sale securities, net of tax	—	—	—	(153)	—	(153)
Adoption of new accounting standard (Topic 606)	—	—	—	—	44,339	44,339
Balance as of October 31, 2018	**81,009,507**	**$ 8**	**$ 1,320,279**	**$ (8,713)**	**$ 175,624**	**$ 1,487,198**
Net income (loss)	—	—	—	—	(1)	(1)
Issuance of common stock upon exercise of stock options	68,120	—	413	—	—	413
Issuance of common stock upon vesting of RSUs	312,878	—	—	—	—	—
Stock-based compensation	—	—	24,329	—	—	24,329
Foreign currency translation adjustment	—	—	—	235	—	235
Unrealized gain (loss) on available-for-sale securities, net of tax	—	—	—	1,197	—	1,197
Reclassification adjustment for realized gain (loss) on available-for-sale securities, included in net income (loss)	—	—	—	(273)	—	(273)
Balance as of January 31, 2019	**81,390,505**	**$ 8**	**$ 1,345,021**	**$ (7,554)**	**$ 175,623**	**$ 1,513,098**
Net income (loss)	—	—	—	—	(8,581)	(8,581)
Issuance of common stock upon exercise of stock options	92,020	—	748	—	(4)	744
Issuance of common stock upon vesting of RSUs	310,954	—	—	—	—	—
Stock-based compensation	—	—	21,130	—	—	21,130
Foreign currency translation adjustment	—	—	—	(983)	—	(983)
Unrealized gain (loss) on available-for-sale securities, net of tax	—	—	—	704	—	704
Reclassification adjustment for realized gain (loss) on available-for-sale securities, included in net income (loss)	—	—	—	(111)	—	(111)
Balance as of April 30, 2019	**81,793,479**	**$ 8**	**$ 1,366,899**	**$ (7,944)**	**$ 167,038**	**$ 1,526,001**

See accompanying Notes to Condensed Consolidated Financial Statements.

GUIDEWIRE SOFTWARE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited, in thousands)

	Nine Months Ended April 30,	
	2020	**2019**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income (loss)	$ (65,973)	$ (2,273)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	32,255	29,140
Amortization of debt discount and issuance costs	9,598	9,082
Stock-based compensation	76,075	68,757
Charges to bad debt and revenue reserves	190	479
Deferred income tax	(11,046)	(11,836)
Accretion of discount on available-for-sale securities, net	(2,366)	(5,696)
Changes in fair value of strategic investment	10,672	—
Other non-cash items affecting net income (loss)	701	575
Changes in operating assets and liabilities:		
Accounts receivable	58,180	14,769
Unbilled accounts receivable	(44,740)	(43,858)
Prepaid expenses and other assets	(4,537)	(5,832)
Operating lease assets	7,111	—
Accounts payable	(5,680)	(11,136)
Accrued employee compensation	(25,286)	(5,065)
Deferred revenue	(25,735)	(29,639)
Lease liabilities	(2,634)	—
Other liabilities	(878)	5,785
Net cash provided by (used in) operating activities	5,907	13,252
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of available-for-sale securities	(849,312)	(778,011)
Sales and maturities of available-for-sale securities	904,959	727,102
Purchases of property and equipment	(18,966)	(28,746)
Capitalized software development costs	(3,273)	(2,302)
Net cash provided by (used in) investing activities	33,408	(81,957)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of common stock upon exercise of stock options	3,077	1,851
Net cash provided by (used in) financing activities	3,077	1,851
Effect of foreign exchange rate changes on cash and cash equivalents	(2,678)	(1,417)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	39,714	(68,271)
CASH AND CASH EQUIVALENTS—Beginning of period	254,101	437,140
CASH AND CASH EQUIVALENTS—End of period	$ 293,815	$ 368,869
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid for interest	$ 5,000	$ 5,036
Cash paid for income taxes, net of tax refunds	$ 4,307	$ 3,710
Accruals for purchase of property and equipment	$ 622	$ 13,648
Accruals for capitalized software costs	$ 263	$ 170

See accompanying Notes to Condensed Consolidated Financial Statements.

GUIDEWIRE SOFTWARE, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

The Company and Summary of Significant Accounting Policies and Estimates

Company

Guidewire Software, Inc., a Delaware corporation, was incorporated on September 20, 2001. Guidewire Software, Inc., together with its subsidiaries (the “Company”), provides an industry platform, which combines software, services, and a partner ecosystem to enable its customers to run, differentiate, and grow their business. The Company's software products and solutions support core insurance operations, provide insights and enable smarter decision-making, and support digital engagement with customers and agents across the insurance life-cycle. The Company and its system integrator partners provide professional services to implement the Company's software, and the Company offers post-production software support. The Company’s customers are primarily property and casualty insurance carriers.

Basis of Presentation and Consolidation

The condensed consolidated financial statements and accompanying notes include the Company and its wholly-owned subsidiaries and reflect all adjustments (all of which are normal and recurring in nature) that, in the opinion of management, are necessary for a fair presentation of the interim periods presented. All intercompany balances and transactions have been eliminated in consolidation. Certain information and disclosures normally included in annual financial statements prepared in accordance with generally accepted accounting principles in the United States of America (“GAAP”) have been condensed or omitted under the rules and regulations of the U.S. Securities and Exchange Commission (“SEC”).

These condensed consolidated financial statements should be read in conjunction with the Company’s financial statements and related notes, together with management’s discussion and analysis of financial condition and results of operations, presented in the Company’s Annual Report on Form 10-K for the fiscal year ended July 31, 2019, as amended by the Company's Annual Report on Form 10-K/A for the fiscal year ended July 31, 2019 (collectively, the "Annual Report on Form 10-K"). There have been no changes in the Company’s significant accounting policies from those that were disclosed in the Company’s consolidated financial statements included in the Company’s Annual Report on Form 10-K, except for changes to operating lease recognition resulting from the adoption of ASU No. 2016-02, “Leases”, Accounting Standards Codification 842 ("ASC 842").

Use of Estimates

The preparation of the accompanying condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions about future events that affect the amounts of assets and liabilities reported, disclosures about contingent assets and liabilities, and reported amounts of revenue and expenses. Significant items subject to such estimates include, but are not limited to, revenue recognition, the useful lives of property and equipment and intangible assets, allowance for doubtful accounts and revenue reserves, valuation allowance for deferred tax assets, stock-based compensation, annual bonus attainment, income tax uncertainties, fair value of convertible senior notes, valuation of goodwill and intangible assets, valuation of strategic investments, software development costs to be capitalized, and contingencies. These estimates and assumptions are based on management’s best estimates and judgment. Management regularly evaluates its estimates and assumptions using historical experience and other factors; however, actual results could differ from these estimates.

Foreign Currency

The functional currency of the Company’s foreign subsidiaries is their respective local currency. The Company translates all assets and liabilities of foreign subsidiaries to U.S. dollars at the current exchange rate as of the applicable balance sheet date. Revenue and expenses are translated at the average exchange rate prevailing during the period in which the transactions occur. The effects of foreign currency translations are recorded in accumulated other comprehensive income (loss) in the condensed consolidated balance sheets. Transaction gains and losses that arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency of the recording entity are presented as other income (expense) in the condensed consolidated statements of operations.

Cash and Cash Equivalents

Cash and cash equivalents are comprised of cash and highly liquid investments with remaining maturities of 90 days or less at the date of purchase. Cash equivalents primarily consist of commercial paper and money market funds.

Investments

Management determines the appropriate classification of investments at the time of purchase based upon management's intent with regard to such investments. All investments in the periods presented have been classified as available-for-sale.

The Company classifies investments as short-term when they have remaining contractual maturities of one year or less from the balance sheet date, and as long-term when the investments have remaining contractual maturities of more than one year from the balance sheet date. All investments are recorded at fair value with unrealized holding gains and losses included in accumulated other comprehensive income (loss) in the condensed consolidated balance sheets.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets. Maintenance and repairs that do not extend the life or improve an asset are expensed in the period incurred.

The estimated useful lives of property and equipment are as follows:

Computer hardware	3 years
Purchased software	3 years
Equipment and machinery	3 to 5 years
Furniture and fixtures	5 years
Leasehold improvements	Shorter of 10 years or remaining lease term

Software Development Costs

Certain development costs related to software delivered to customers ("self-managed software") incurred subsequent to the establishment of technological feasibility are subject to capitalization and amortization over the estimated lives of the related products. Technological feasibility is established upon completion of a working model. Costs incurred subsequent to the establishment of technological feasibility have not been material and, therefore, all software development costs related to self-managed software have been charged to research and development expense in the condensed consolidated statements of operations as incurred.

For qualifying costs incurred for computer software developed for internal use, which includes software used to deliver subscription services exclusively through the cloud, the Company begins to capitalize costs to develop software when preliminary development efforts are successfully completed, management has authorized and committed project funding, it is probable that the project will be completed, and the software will be used as intended. If any of these criteria cease being met before the software reaches its intended use, any capitalized costs related to the project will be impaired. When the software reaches its intended use, capitalized costs are amortized to cost of revenue over the estimated useful lives of the related assets, generally estimated to be three to five years. Costs incurred prior to meeting these capitalization criteria and costs incurred for training and maintenance are expensed as incurred and recorded in research and development expense in the condensed consolidated statements of operations. Capitalized software development costs are recorded in property and equipment in the condensed consolidated balance sheets.

Leases

On August 1, 2019, the Company adopted ASC 842 using the modified retrospective transition approach by applying the new standard to all leases existing at the date of initial application. Under ASC 842, the Company determines if an arrangement is a lease at inception of the agreement. If an arrangement is determined to be a lease, an operating lease asset, also known as a right-of-use asset, and lease liability are recorded based on the present value of lease payments over the lease term. In connection with determining the present value of the lease payments, the Company considers only payments that are fixed and determinable at the time of commencement, including non-lease components that are fixed throughout the lease term. Variable components of the lease payments such as utilities and maintenance costs, are expensed as incurred and not included in determining the present value of the lease liability. As the Company's leases generally do not provide an implicit rate, the Company's incremental borrowing rate, calculated based on available information at the lease commencement date, is used in determining the present value of the lease payments. The Company's incremental borrowing rate is a hypothetical rate based on the Company's understanding of its credit rating. The Company's lease term used to calculate the lease liability and operating lease asset includes options to extend or terminate the lease if it is reasonably certain the Company will exercise that option. Operating lease assets also include any lease payments made prior to commencement and are recorded net of any lease incentives received. Lease expense is recognized on a straight-line basis over the lease term and is reflected in the condensed consolidated statements of operations in each of the cost of revenue and operating expense categories.

The Company also enters into agreements to sublease unoccupied office space. Any sublease payments received in excess of the straight-line rent expense related to the subleased space are recorded as an offset to operating expenses over the sublease term.

Operating leases are included in operating lease assets, other current liabilities, and lease liabilities on the condensed consolidated balance sheets.

Impairment of Long-Lived Assets, Intangible Assets, and Goodwill

The Company evaluates its long-lived assets, consisting of property and equipment, operating lease assets, and intangible assets for indicators of possible impairment when events or changes in circumstances indicate that the carrying amount of certain assets may not be recoverable. Impairment exists if the carrying amount of such assets exceed the estimates of future net undiscounted cash flows expected to be generated by such assets. Should impairment exist, the impairment loss would be measured based on the excess carrying amount of the assets over the estimated fair value of the assets.

The Company tests goodwill for impairment annually, during the fourth quarter of each fiscal year, and in the interim whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The Company evaluates qualitative factors to determine whether it is more likely than not that the fair value of the Company’s single reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the two-step goodwill impairment test. In performing the qualitative assessment, the Company considers events and circumstances, including, but not limited to, macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, changes in management or key personnel, changes in strategy, changes in customers, changes in the composition or carrying amount of a reporting unit’s net assets, and changes in the price of the Company’s common stock. If, after assessing the totality of events and circumstances, the Company determines that it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, then the two-step goodwill impairment test is not performed. There have been no goodwill impairments during the periods presented.

Convertible Senior Notes

In March 2018, the Company issued $400.0 million aggregate principal amount of 1.25% Convertible Senior Notes due 2025 (the “Convertible Senior Notes”). The Company accounts for the liability and equity components of the issued Convertible Senior Notes separately. The carrying amount of the equity component, representing the conversion option, was determined by deducting the fair value of the liability component from the par value of the Convertible Senior Notes as a whole. This difference represents a debt discount that is amortized to interest expense using the effective interest method over the term of the Convertible Senior Notes. The carrying amount of the liability component was calculated by measuring the fair value of a similar liability that does not have an associated convertible feature. The liability and equity components will not be remeasured as long as the conversion option continues to meet the requirements for equity classification. The equity component is net of issuance costs and recorded in additional paid-in capital.

Business Combinations

The Company uses its best estimates and assumptions to assign fair value to the tangible and intangible assets acquired and liabilities assumed at the acquisition date. Goodwill is calculated as the difference between the acquisition date fair value of the consideration transferred and the values assigned to the assets acquired and liabilities assumed. The Company's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and subject to refinement and, as a result, actual results may differ from estimates. During the measurement period, which may be up to one year from the acquisition date, if new information is obtained about facts and circumstances that existed as of the acquisition date, the Company may record adjustments to the fair value of these assets and liabilities, with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the fair value of assets acquired and liabilities assumed, whichever comes first, subsequent adjustments, if any, are recorded in the condensed consolidated statements of operations.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist of cash, cash equivalents, investments, accounts receivable and unbilled accounts receivable. The Company maintains its cash, cash equivalents, and investments with high quality financial institutions. The Company is exposed to credit risk for cash held in financial institutions in the event of a default to the extent that such amounts recorded in the condensed consolidated balance sheets are in excess of amounts that are insured by the Federal Deposit Insurance Corporation.

One customer accounted for 10% or more of the Company's revenue for both the three months ended April 30, 2020 and 2019. No customer individually accounted for 10% or more of the Company's revenue for the nine months ended April 30, 2020 and 2019. No customer individually accounted for 10% or more of the Company's accounts receivable as of April 30, 2020 or July 31, 2019.

Accounts Receivable and Allowance for Doubtful Accounts and Revenue Reserves

Accounts receivable are recorded at invoiced amounts and do not bear interest. While the Company does not require collateral, the Company performs ongoing credit evaluations of its customers. The Company maintains an allowance for doubtful accounts based upon the expected collectability of its accounts receivable. The expectation of collectability is based on historical loss patterns, the number of days that billings are past due, and an evaluation of the potential risk of loss associated with delinquent accounts.

Revenue Recognition

The Company's revenue is derived from contracts with customers. The majority of the Company's revenue is derived from licensing arrangements for its software, subscriptions to its cloud services, and implementation and other professional services arrangements. The Company accounts for revenue in accordance with Accounting Standards Codification 606, Revenue from Contracts with Customers ("ASC 606"), which the Company adopted on August 1, 2018. The Company recorded a net increase to retained earnings of $44.3 million as of August 1, 2018 due to the cumulative impact of adopting ASC 606 using the modified retrospective method. Refer to Note 1 to the consolidated financial statements included in the Company's 2018 Form 10-K/A for a description of the Company's revenue recognition policy prior to August 1, 2018.

The core principle of ASC 606 is to recognize revenue upon the transfer of services or products to customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for those services or products. The Company applies the following framework to recognize revenue:

Identification of the contract, or contracts, with the customer

The Company considers the terms and conditions of written contracts and its customary business practices in identifying its contracts under ASC 606. The Company determines it has a contract with a customer when the contract is approved, the Company can identify each party's rights regarding the services and products to be transferred, the Company can identify the payment terms for the services and products, the Company has determined that the customer has the ability and intent to pay, and the contract has commercial substance. In general, contract terms will be reflected in a written document that is signed by both parties. At contract inception, the Company evaluates whether two or more contracts should be combined and accounted for as a single contract. The Company also evaluates the customer's ability and intent to pay, which is based on a variety of factors, including the customer's historical payment experience or, in the case of a new customer, credit and financial information pertaining to the customer.

Contracts may be modified to account for changes in contract scope or price. The Company considers contract modifications to exist when the modification either creates new rights or obligations or changes the existing enforceable rights and obligations of either party. Contract modifications for products and services that are distinct from the existing contract and are priced commensurate with their standalone selling price are treated as separate contracts, and are accounted for prospectively. Contract modifications for products and services that are distinct but are not priced commensurate with their standalone selling price or are not distinct from the existing contract may affect the initial transaction price or the allocation of the transaction price to the performance obligations in the contract. In such cases, revenue recognized may be adjusted.

Identification of the performance obligation in the contract

Performance obligations promised in a contract are identified based on the services or products that will be transferred to the customer that are both:

- capable of being distinct, whereby the customer can benefit from the service or product either on its own or together with other resources that are readily available from the Company or third parties, and
- distinct in the context of the contract, whereby the transfer of the service or product is separately identifiable from other promises in the contract.

To the extent a contract includes multiple promised services or products, the Company applies judgment to determine whether promised services or products are capable of being distinct and distinct in the context of the contract. If these criteria are not met, the promised services or products are accounted for as a combined performance obligation.

The Company generates revenue from the following sources, which represent the performance obligations of the Company:

- Self-managed software licenses related to term or perpetual agreements;
- Maintenance activities that consist of email and phone support, bug fixes, and unspecified software updates and upgrades released when, and if, available during the maintenance term;
- Subscription services related to the Company’s Software-as-a-Service (“SaaS”) offerings; and
- Services related to the implementation and configuration of the Company’s software, reimbursable travel, and training.

Term licenses generally have had a two-year initial term with a customer option to renew on an annual basis after the initial term. In certain circumstances, the Company will enter into term licenses with an initial term of more than two years or a renewal period longer than one year. Maintenance for term licenses follows the same contract periods. Subscriptions are typically sold with a three- to five-year initial term with a customer option to renew on an annual basis after the initial term. Professional services typically are time and materials contracts that last for an average period of approximately one year.

Determination of the transaction price

The transaction price is determined based on the consideration to which the Company expects to be entitled in exchange for transferring services and products to the customer. Consideration may vary due to discounts, incentives, and potential service level credits or contractual penalties. Variable consideration is estimated and included in the transaction price if, in the Company’s judgment, it is probable that there will not be a significant future reversal of cumulative revenue under the contract.

Self-managed software licenses and subscription services may be subject to either fixed or variable installments. Variable installments are generally subject to changes in a customer’s Direct Written Premium (“DWP”) or a customer’s Gross Written Premium (“GWP”). When consideration is subject to variable installments, the Company estimates variable consideration using the expected value method based on historical DWP or GWP usage to the extent that a significant revenue reversal is not probable to occur. When consideration is subject to a customer termination right, the Company estimates the total transaction price using the most likely method, and defers consideration associated with the customer’s termination right until it expires.

The Company evaluates whether a significant financing component exists when the timing of revenue recognition occurs in advance of invoicing. This timing difference occurs when control of the software license is transferred at a point in time, usually at the contract onset, but the customer payments occur over time. A significant financing component generally does not exist under the Company’s standard contracting and billing practices. For example, the Company’s typical time-based licenses have a two-year initial term with the final payment due at the end of the first year.

Allocation of the transaction price to the performance obligations in the contract

If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple performance obligations require an allocation of the transaction price to each performance obligation based on its standalone selling price (“SSP”) in relation to the total fair value of all performance obligations in the arrangement. The majority of the Company’s contracts contain multiple performance obligations, such as when licenses are sold with maintenance, implementation services or training services. Additionally, as customers transition to subscription services, customers may be under contract for both self-managed licenses and subscription services for a period of time, which may require an allocation of the transaction price to each performance obligation. Some of the Company’s performance obligations, such as maintenance, implementation services, and training services, have observable inputs that are used to determine the SSP of those distinct performance obligations. Where SSP is not directly observable, the Company determines the SSP using information that may include market conditions and other observable inputs. In the circumstances when available information to determine SSP is highly variable or uncertain, such as for our term licenses, the Company will use the residual method.

Recognition of revenue when, or as, the Company satisfies a performance obligation

The Company recognizes revenue when control of the services or products are transferred to a customer, in an amount that reflects the consideration the Company expects to be entitled to in exchange for those services or products. The Company is principally responsible for the satisfaction of its distinct performance obligations, which are satisfied either at a point in time or over a period of time.

Performance obligations satisfied at a point in time

Self-managed software licenses

Self-managed term and perpetual software licenses comprise the majority of distinct performance obligations that are satisfied at a point in time. Revenue is recognized at the point in which the self-managed software licenses are made available to a customer. Consideration for self-managed software licenses is typically billed in advance on an annual basis over the license term.

Performance obligations satisfied over a period of time

Subscriptions, maintenance activities, and professional service arrangements comprise the majority of distinct performance obligations that are satisfied over a period of time.

Subscription arrangements

Revenue from subscription arrangements is recognized ratably over the subscription period using a time-based measure of progress as customers receive the benefits from their subscriptions over the contractually agreed-upon term. The Company’s subscription periods are generally three to five years. Consideration from subscription arrangements is typically billed in advance on an annual basis over the contract period.

Maintenance activities

Revenue from maintenance activities associated with self-managed licenses is a stand-ready obligation, which is recognized over the contractually agreed-upon term using a time-based measure of progress as customers receive benefits from the availability of support technicians over the support period. Consideration for maintenance activities is typically billed in advance on an annual basis. The Company’s maintenance activities are consistently priced as a percentage of the associated self-managed software license.

Services

Revenue from professional service arrangements is recognized over the respective service period as the underlying services are performed.

In substantially all of the Company’s professional service contracts, services are separately identifiable performance obligations for which related revenue and costs are recognized according to when each respective service obligation is delivered. Substantially all professional services engagements are billed and recognized on a time and materials basis. In select situations, the Company will contract professional services on a fixed fee basis, where the Company generally recognizes services revenue over time, using an input method. The measure of progress of the professional services being provided under these fixed fee arrangements is based on hours incurred compared to estimates of the total hours to complete the performance obligation.

When professional services are sold with a self-managed license or subscription arrangement, the Company evaluates whether the performance obligations are distinct or separately identifiable, or whether they constitute a single performance obligation. In the limited cases where professional services are not considered to be distinct from the self-managed license or subscription services, the Company will recognize revenue based on the nature and term of the combined performance obligation when control of the combined performance obligation is transferred to the customer.

Balance Sheet Presentation

Contracts with customers are reflected in the condensed consolidated balance sheets as follows:

- Accounts receivable, net represents amounts billed to customers in accordance with contract terms for which payment has not yet been received. It is presented net of the allowance for doubtful accounts and revenue reserves as part of current assets in the condensed consolidated balance sheets.

- Unbilled accounts receivable, net represents amounts that are unbilled due to agreed-upon contractual terms in which billing occurs subsequent to revenue recognition. This situation typically occurs when the Company transfers control of self-managed software licenses to customers up-front, but invoices customers annually over the term of the license, which has typically been two years. Unbilled accounts receivable is classified as either current or non-current based on the duration of remaining time between the date of the condensed consolidated balance sheets and the anticipated due date of the underlying receivables. Under ASC 606, this balance represents contract assets.

- Contract costs include customer acquisition costs, which consist primarily of sales commissions paid to sales personnel and their related payroll taxes and referral fees paid to third-parties, and costs to fulfill a contract, which consist primarily of royalties payable to third-party software providers that support both the Company’s software offerings and support services. The short-term portion is presented as prepaid and other current assets. The long-term portion is presented as other assets.

- Deferred costs represent costs related to our professional services that have been deferred to align with revenue recognition. The short-term portion is presented as prepaid and other current assets. The long-term portion is presented as other assets.

- Deferred revenue, net represents amounts that have been invoiced and for which the Company has the right to bill, but that have not been recognized as revenue because the related products or services have not been transferred. Deferred revenue that will be realized during the 12-month period following the date of the condensed consolidated balance sheets is recorded as current. The remaining deferred revenue is recorded as non-current. Under ASC 606, this balance represents contract liabilities.

The Company may receive consideration from its customers in advance of performance on a portion of the contract and, on another portion of the contract, perform in advance of receiving consideration. Contract assets and liabilities related to rights and obligations in a contract are interdependent. Therefore, contract assets and liabilities are presented net at the contract level, as either a single contract asset or a single contract liability, in the consolidated balance sheets.

Remaining performance obligations represent contracted revenue that has not yet been recognized, which includes deferred revenue and amounts that will be invoiced and recognized as revenue in future periods. The Company excludes amounts related to professional services contracts that are on a time and materials basis from remaining performance obligations.

Contract Costs

Contract costs consists of two components, customer acquisition costs and costs to fulfill a contract.

Customer acquisition costs are capitalized only if the costs are incrementally incurred to obtain a customer contract. Contract costs are classified as either current or non-current based on the duration of time remaining between the date of the condensed consolidated balance sheets and the anticipated amortization date of the associated costs. Capitalized customer acquisition costs related to software licenses, subscriptions, and support services are amortized over the anticipated period of time that such goods and services are expected to be provided to a customer, which the Company estimates to be approximately five years. The amortization of customer acquisition costs is classified as a sales and marketing expense in the condensed consolidated statement of operations.

Costs to fulfill a contract, or fulfillment costs, are only capitalized if they relate directly to a contract with a customer, the costs generate or enhance resources that will be used to satisfy performance obligations in the future, and the costs are expected to be recoverable. Fulfillment costs would be generally amortized over the same period of time as the customer acquisition costs. The amortization of fulfillment costs is classified as a cost of revenue in the condensed consolidated statement of operations.

Advertising Costs

Advertising costs are expensed as incurred and amounts incurred were not material during the three and nine months ended April 30, 2020 and 2019.

Stock-Based Compensation

The Company accounts for stock-based compensation using the fair value method, which requires the Company to measure stock-based compensation based on the grant-date fair value of the awards and recognize the compensation expense over the requisite service period. The Company recognizes compensation expense net of actual forfeitures. To date, the Company has granted or assumed stock options, restricted stock awards (“RSAs”), time-based restricted stock units (“RSUs”), performance-based restricted stock units (“PSUs”), and restricted stock units that may be earned subject to the Company’s total shareholder return ranking relative to the software companies in the S&P Software and Services Select Industry Index (“S&P Index”) for a specified performance period or specified performance periods, service periods, and in select cases, subject to certain performance conditions (“TSR PSUs”). RSAs, RSUs, PSUs, and TSR PSUs are collectively referred to as “Stock Awards.”

The fair value of the Company’s RSAs, RSUs, and PSUs is equal to the market value of the Company’s common stock on the date of grant. These awards are subject to time-based vesting, which generally occurs over a period of four years. The Company recognizes compensation expense for awards that contain only service conditions on a straight-line basis over the requisite service period, which is generally the vesting period of the respective awards. The Company recognizes the compensation cost for awards that contain either performance conditions, market conditions, or both using the graded vesting method and a portion of the expense may fluctuate depending on changing estimates of the achievement of the performance conditions.

The fair value of the Company’s stock options and TSR PSUs are estimated at the grant date using the Black-Scholes model and Monte Carlo simulation method, respectively. The assumptions utilized under these methods require judgments and estimates. Changes in these inputs and assumptions could affect the measurement of the estimated fair value of the related compensation expense of these stock options and stock awards. Compensation expense associated with TSR PSUs will be recognized over the vesting period regardless of whether the market condition is ultimately satisfied; however, the expense will be reversed if a grantee terminates prior to satisfying the requisite service period. For TSR PSUs containing an additional performance condition, a portion of the expense may fluctuate depending on changing estimates of the achievement of the performance conditions. All TSR PSUs will vest at the end of a three-year period.

Income Taxes

Income taxes are accounted for under the asset and liability method. Under this method, the Company determines deferred tax assets and liabilities on the basis of the differences between the financial statement carrying amounts and tax basis of existing assets and liabilities by using enacted tax rates in effect for the year in which the differences are expected to reverse. All deferred tax assets and liabilities are classified as non-current on the Company’s condensed consolidated balance sheets. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance against deferred tax assets is recorded when it is more likely than not that some portion or all of such deferred tax assets will not be realized and is based on both positive and negative evidence about the future, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations.

The effective tax rate in any given financial statement period may differ materially from the statutory rate. These differences may be caused by changes in tax regulations and resulting changes in the deferred tax valuation allowance; changes in the mix and level of income or losses; changes in the expected outcome of tax audits; permanent differences for stock-based compensation, including excess tax benefits; research and development credits; the tax rate differences between the United States and foreign countries; foreign withholding taxes; certain non-deductible expenses, including executive compensation; acquisition-related expenses; and provisions under the Tax Cuts and Jobs Act (the “Tax Act”), including a provision to tax global intangible low-taxed income of foreign subsidiaries, a special deduction for foreign-derived intangible income, and a base erosion anti-abuse tax that may tax certain payments between a U.S. corporation and its foreign subsidiaries.

The Company records interest and penalties related to unrecognized tax benefits as income tax expense in its condensed consolidated statement of operations.

Recently Adopted Accounting Pronouncements

Leases

On August 1, 2019, the Company adopted ASC 842 using the modified retrospective transition approach by applying the new standard to all leases existing at the date of initial application. Results and disclosure requirements for reporting periods beginning after August 1, 2019 are presented under ASC 842, while prior period amounts have not been adjusted and continue to be reported in accordance with our historical accounting under ASC 840, Leases ("ASC 840").

The Company elected the package of practical expedients permitted under the transition guidance, such that, for any leases that existed prior to August 1, 2019, the Company did not reassess the lease classification, whether contracts are or contain embedded leases, and the capitalization of initial direct costs. The Company also elected to combine lease and non-lease components for all leases and to keep leases with an initial term of 12 months or less off the balance sheet and recognize the associated lease payments in the condensed consolidated statement of operations on a straight-line basis over the lease term.

Upon adoption, the Company recognized total operating lease assets of $93.0 million, with corresponding lease liabilities of $111.7 million in the condensed consolidated balance sheets. The operating lease assets include adjustments for prepayments and lease incentives. The adoption did not impact opening retained earnings.

Income Statement, Reporting Comprehensive Income (Topic 220): Reclassification of Certain Effects from Accumulated Other Comprehensive Income

In February 2018, the Financial Accounting Standard Board ("FASB") issued ASU No. 2018-02, Income Statement, Reporting Comprehensive Income (Topic 220): Reclassification of Certain Effects from Accumulated Other Comprehensive Income, which allows a reclassification of stranded tax effects from accumulated other comprehensive income to retained earnings, as a result of the Tax Act. On August 1, 2019, the Company adopted this standard, which had an immaterial impact on retained earnings.

Recent Accounting Pronouncements Not Yet Adopted

Intangibles, Goodwill and Other (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract

In August 2018, the FASB issued ASU No. 2018-15, Intangibles, Goodwill and Other (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract (“ASU 2018-15”), which requires implementation costs incurred in cloud computing arrangements to be deferred and recognized over the term of the arrangement, if those costs would be capitalized in a software licensing arrangement under the internal-use software guidance in ASC 350-40. ASU 2018-15 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019, with early adoption permitted. The Company is in the process of evaluating the impact of adopting the new standard for its 2021 fiscal year and subsequent periods.

Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments

In June 2016, the FASB issued ASU No. 2016-13 (ASU 2016-13), Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost. ASU 2016-13 replaces the existing incurred loss impairment model with an expected loss model which requires the use of forward-looking information to calculate credit loss estimates. It also eliminates the concept of other-than-temporary impairment and requires credit losses related to available-for-sale debt securities to be recorded through an allowance for credit losses rather than as a reduction in the amortized cost basis of the securities. These changes will result in earlier recognition of credit losses. ASU 2016-13 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019, with early adoption permitted. The Company is in the process of evaluating the impact of adopting the new standard for its 2021 fiscal year and subsequent periods.

Other recent accounting pronouncements that are or will be applicable to the Company did not, or are not expected to, have a material impact on the Company's present or future financial statements.

2. Revenue

Disaggregation of Revenue

Revenue by revenue type and by geography is as follows (in thousands):

	Three Months Ended April 30, 2020			
	License and subscription	Maintenance	Services	Total
Geography:				
United States	$ 54,329	$ 13,476	$ 39,387	$ 107,192
Canada	13,343	1,735	1,482	16,560
Other Americas	388	1,107	1,270	2,765
Total Americas	68,060	16,318	42,139	126,517
United Kingdom	5,332	1,264	625	7,221
Other EMEA	11,837	1,626	8,716	22,179
Total EMEA	17,169	2,890	9,341	29,400
Total APAC	7,953	1,486	2,809	12,248
Total revenue	$ 93,182	$ 20,694	$ 54,289	$ 168,165

	Three Months Ended April 30, 2019			
	License and subscription	Maintenance	Services	Total
Geography:				
United States	$ 48,439	$ 13,648	$ 43,432	$ 105,519
Canada	6,436	2,167	2,303	10,906
Other Americas	1,688	1,112	1,755	4,555
Total Americas	56,563	16,927	47,490	120,980
United Kingdom	990	1,118	3,128	5,236
Other EMEA	4,260	1,722	10,757	16,739
Total EMEA	5,250	2,840	13,885	21,975
Total APAC	14,405	1,568	3,939	19,912
Total revenue	$ 76,218	$ 21,335	$ 65,314	$ 162,867

	Nine Months Ended April 30, 2020			
	License and subscription	Maintenance	Services	Total
Geography:				
United States	$ 159,550	$ 41,037	$ 111,449	$ 312,036
Canada	36,171	5,190	4,199	45,560
Other Americas	2,802	3,325	5,891	12,018
Total Americas	198,523	49,552	121,539	369,614
United Kingdom	21,709	3,665	4,209	29,583
Other EMEA	24,400	5,004	18,662	48,066
Total EMEA	46,109	8,669	22,871	77,649
Total APAC	35,927	4,560	10,883	51,370
Total revenue	$ 280,559	$ 62,781	$ 155,293	$ 498,633

	Nine Months Ended April 30, 2019			
	License and subscription	Maintenance	Services	Total
Geography:				
United States	$ 146,336	$ 40,060	$ 128,433	$ 314,829
Canada	24,605	6,587	7,534	38,726
Other Americas	2,660	3,293	5,257	11,210
Total Americas	173,601	49,940	141,224	364,765
United Kingdom	16,624	3,428	8,881	28,933
Other EMEA	28,806	5,334	28,057	62,197
Total EMEA	45,430	8,762	36,938	91,130
Total APAC	38,580	4,900	12,281	55,761
Total revenue	$ 257,611	$ 63,602	$ 190,443	$ 511,656

No country or region, other than those presented above, accounted for more than 10% of revenue during the three and nine months ended April 30, 2020 and 2019.

Revenue by major product or service type is as follows (in thousands):

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2020	2019	2020	2019
License and subscription				
Term license	$ 62,656	$ 60,252	$ 191,104	$ 211,205
Subscription	30,078	14,691	86,916	44,779
Perpetual license	448	1,275	2,539	1,627
Maintenance	20,694	21,335	62,781	63,602
Services	54,289	65,314	155,293	190,443
Total revenue	$ 168,165	$ 162,867	$ 498,633	$ 511,656

Customer Contract - Related Balance Sheet Amounts

Amounts related to customer contract-related arrangements are included in the condensed consolidated balance sheets as follows (in thousands):

	April 30, 2020	July 31, 2019
Unbilled accounts receivable, net	$ 90,843	$ 46,103
Contract costs, net	30,621	30,390
Deferred revenue, net	(106,096)	(131,831)

As of April 30, 2020 and July 31, 2019, there was no allowance for doubtful accounts associated with unbilled accounts receivable, respectively.

Contract costs

The current portion of contract costs in the amount of $8.2 million and $7.0 million is included in prepaid and other current assets in the Company's condensed consolidated balance sheets as of April 30, 2020 and July 31, 2019, respectively. The non-current portion of contract costs in the amount of $22.4 million and $23.4 million is included in other assets in the Company's condensed consolidated balance sheets as of April 30, 2020 and July 31, 2019, respectively. The Company amortized $2.2 million and $1.2 million of contract costs during the three months ended April 30, 2020 and 2019, respectively, and $5.6 million and $3.6 million during the nine months ended April 30, 2020 and 2019, respectively.

Deferred revenue

During the three and nine months ended April 30, 2020, the Company recognized revenue of $17.2 million and $94.1 million, respectively, related to the Company's deferred revenue balance reported as of July 31, 2019.

Performance Obligations

The aggregate amount of consideration allocated to performance obligations either not satisfied or partially satisfied was $397.9 million as of April 30, 2020. Subscription services are typically satisfied over three to five years, maintenance services are generally satisfied within one year, and professional services are typically satisfied within one year. Professional services under time and material contracts are not included in the performance obligations calculation as these arrangements can be cancelled at any time.

3. Fair Value of Financial Instruments

Available-for-sale investments within cash equivalents and investments consist of the following (in thousands):

	April 30, 2020			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
U.S. Government agency securities	$ 133,556	$ 171	$ (107)	$ 133,620
Commercial paper	156,729	—	—	156,729
Corporate bonds	609,810	2,800	(561)	612,049
U.S. Government bonds	78,138	733	—	78,871
Asset-backed securities	60,450	292	(18)	60,724
Foreign government bonds	10,867	4	(1)	10,870
Certificates of deposit	37,645	—	—	37,645
Money market funds	182,258	—	—	182,258
Total	$ 1,269,453	$ 4,000	$ (687)	$ 1,272,766

	July 31, 2019			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
U.S. Government agency securities	$ 55,904	$ 4	$ (29)	$ 55,879
Commercial paper	239,333	—	—	239,333
Corporate bonds	666,087	1,612	(111)	667,588
U.S. Government bonds	130,530	94	(29)	130,595
Certificates of deposit	50,796	—	—	50,796
Money market funds	115,711	—	—	115,711
Total	$ 1,258,361	$ 1,710	$ (169)	$ 1,259,902

The following table shows the gross unrealized losses and fair value of the Company's investments with unrealized losses, aggregated by investment category and the length of time that individual securities have been in an unrealized loss position (in thousands):

	April 30, 2020					
	Less Than 12 Months		12 Months or Greater		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
U.S. Government agency securities	$ 61,828	$ (107)	$ —	$ —	$ 61,828	$ (107)
Corporate bonds	80,295	(561)	—	—	80,295	(561)
Asset-backed securities	1,478	(18)	—	—	1,478	(18)
Foreign government bonds	4,866	(1)	—	—	4,866	(1)
Total	$ 148,467	$ (687)	$ —	$ —	$ 148,467	$ (687)

As of April 30, 2020, the Company had 41 investments in a gross unrealized loss position. The unrealized losses on its available-for-sale securities were primarily a result of unfavorable changes in interest rates subsequent to the initial purchase of these securities. The Company does not intend to sell, nor does it believe it will need to sell, these securities before recovering the associated unrealized losses. The Company does not consider any portion of the unrealized losses at April 30, 2020 to be other-than-temporarily impaired, nor are any unrealized losses considered to be credit losses. The Company has recorded the securities at fair value in its condensed consolidated balance sheets, with unrealized gains and losses reported as a component of accumulated other comprehensive income (loss). The amount of realized gains and losses reclassified into earnings are based on the specific identification of the securities sold. The realized gains and losses from sales of securities in the periods presented were not material.

The following table summarizes the contractual maturities of the Company's available-for-sale investments measured at fair value (in thousands):

	April 30, 2020		
	Less Than 12 Months	12 Months or Greater	Total
U.S. Government agency securities	$ 20,742	$ 112,878	$ 133,620
Commercial paper	156,729	—	156,729
Corporate bonds	495,082	116,967	612,049
U.S. Government bonds	55,806	23,065	78,871
Asset-backed securities	26,121	34,603	60,724
Foreign government bonds	10,870	—	10,870
Certificates of deposit	33,398	4,247	37,645
Money market funds	182,258	—	182,258
Total	$ 981,006	$ 291,760	$ 1,272,766

Fair Value Measurement

Accounting guidance for fair value measurements defines a three-level valuation hierarchy for disclosures as follows:

Level 1—Unadjusted quoted prices in active markets for identical assets or liabilities;

Level 2—Inputs other than quoted prices included within Level 1 that are observable, unadjusted quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data; and

Level 3—Unobservable inputs that are supported by little or no market activity, which require the Company to develop its own assumptions.

Available-for-sale investments

The following tables summarize the Company's available-for-sale investments measured at fair value, by level within the fair value hierarchy (in thousands):

	April 30, 2020			
	Level 1	**Level 2**	**Level 3**	**Total**
Cash equivalents:				
Commercial paper	$ —	$ 55,084	$ —	$ 55,084
Corporate bonds	—	3,278	—	3,278
Money market funds	182,258	—	—	182,258
Total cash equivalents	182,258	58,362	—	240,620
Short-term investments:				
U.S. Government agency securities	—	20,742	—	20,742
Commercial paper	—	101,645	—	101,645
Corporate bonds	—	491,804	—	491,804
U.S. Government bonds	—	55,806	—	55,806
Asset-backed securities	—	26,121	—	26,121
Foreign government bonds	—	10,870	—	10,870
Certificates of deposit	—	33,398	—	33,398
Total short-term investments	—	740,386	—	740,386
Long-term investments:				
U.S. Government agency securities	—	112,878	—	112,878
Corporate bonds	—	116,967	—	116,967
U.S. Government bonds	—	23,065	—	23,065
Asset-backed securities	—	34,603	—	34,603
Certificates of deposit	—	4,247	—	4,247
Total long-term investments	—	291,760	—	291,760
Total	$ 182,258	$ 1,090,508	$ —	$ 1,272,766

	July 31, 2019			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Commercial paper	$ —	$ 56,132	$ —	$ 56,132
Corporate bonds	—	4,398	—	4,398
Money market funds	115,712	—	—	115,712
Total cash equivalents	115,712	60,530	—	176,242
Short-term investments:				
U.S. Government agency securities	—	39,166	—	39,166
Commercial paper	—	183,201	—	183,201
Corporate bonds	—	477,169	—	477,169
U.S. Government bonds	—	123,600	—	123,600
Certificates of deposit	—	47,000	—	47,000
Total short-term investments	—	870,136	—	870,136
Long-term investments:				
U.S. Government agency securities	—	16,713	—	16,713
Corporate bonds	—	186,021	—	186,021
U.S. Government bonds	—	6,994	—	6,994
Certificates of deposit	—	3,796	—	3,796
Total long-term investment	—	213,524	—	213,524
Total	$ 115,712	$ 1,144,190	$ —	$ 1,259,902

Convertible Senior Notes

The fair value of the Convertible Senior Notes was $414.0 million at April 30, 2020 and $454.1 million at July 31, 2019. The Company estimates the fair value of the Convertible Senior Notes using commonly accepted valuation methodologies and market-based risk measurements that are directly observable, such as unadjusted quoted prices (Level 2). The Company carries the Convertible Senior Notes at initial fair value less unamortized debt discount and issuance costs on its condensed consolidated balance sheets. For further information on the Convertible Senior Notes, see Note 6.

4. Balance Sheet Components

Accounts Receivables, Net

Accounts receivable, net consists of the following (in thousands):

	April 30, 2020	July 31, 2019
Accounts receivable	$ 80,733	$ 139,884
Allowance for doubtful accounts and revenue reserves	(1,146)	(1,441)
Accounts receivable, net	$ 79,587	$ 138,443

Allowance for Doubtful Accounts and Revenue Reserves

Changes to the allowance for doubtful accounts and revenue reserves consists of the following (in thousands):

Allowance, July 31, 2019	$ 1,441
Charges to bad debt and revenue reserves	190
Write-offs, net	(485)
Allowance, April 30, 2020	$ 1,146

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of the following (in thousands):

	April 30, 2020	July 31, 2019
Prepaid expenses	$ 16,773	$ 11,926
Contract costs	8,232	7,015
Deferred costs	7,428	7,030
Deposits and other receivables	9,165	9,595
Prepaid expenses and other current assets	$ 41,598	$ 35,566

Property and Equipment, Net

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

	April 30, 2020	July 31, 2019
Computer hardware	$ 17,422	$ 17,799
Purchased software	5,659	6,741
Capitalized software development costs	10,247	7,374
Equipment and machinery	11,381	10,455
Furniture and fixtures	9,369	8,137
Leasehold improvements	51,182	48,191
Total property and equipment	105,260	98,697
Less accumulated depreciation	(39,799)	(32,888)
Property and equipment, net	$ 65,461	$ 65,809

As of April 30, 2020 and July 31, 2019, no property and equipment was pledged as collateral. Depreciation expense, excluding the amortization of capitalized software development costs, was $3.8 million and $2.1 million for the three months ended April 30, 2020 and 2019, respectively, and was $11.0 million and $6.5 million for the nine months ended April 30, 2020 and 2019, respectively.

The Company capitalizes software development costs for technology applications that the Company will offer solely as cloud-based subscriptions, which is primarily comprised of compensation for employees who are directly associated with the software development projects. The Company begins amortizing the capitalized software development costs once the technology applications are available for general release and amortizes those costs over the estimated lives of the applications, which typically ranges from three to five years. The Company recognized approximately $0.3 million and $0.3 million in amortization expense in cost of revenue - license and subscription on the condensed consolidated statements of operations during the three months ended April 30, 2020 and 2019, respectively, and $0.8 million and $0.9 million during the nine months ended April 30, 2020 and 2019, respectively.

Goodwill and Intangible Assets, Net

Changes in the carrying amount of goodwill was as follows (in thousands):

Goodwill, July 31, 2019	$ 340,877
Changes in carrying value	—
Goodwill, April 30, 2020	$ 340,877

The Company's intangible assets, net are amortized over their estimated useful lives. Intangible assets consist of the following (in thousands):

		April 30, 2020			July 31, 2019		
	Remaining Weighted-Average Useful Life (in years)	Cost	Accumulated Amortization	Net Book Value	Cost	Accumulated Amortization	Net Book Value
Intangible assets:							
Acquired technology	1.8	$ 93,600	$ 68,664	$ 24,936	$ 93,600	$ 53,970	$ 39,630
Customer contracts and related relationships	4.0	35,700	17,016	18,684	35,700	12,566	23,134
Partner relationships	4.9	200	91	109	200	74	126
Trademarks	4.5	2,500	893	1,607	2,500	625	1,875
Order backlog	0.8	8,700	8,005	695	8,700	6,923	1,777
Total	2.8	$ 140,700	$ 94,669	$ 46,031	$ 140,700	$ 74,158	$ 66,542

Amortization expense was $6.6 million and $7.3 million for the three months ended April 30, 2020 and 2019, respectively, and was $20.5 million and $21.9 million for the nine months ended April 30, 2020 and 2019, respectively. The future amortization expense for existing intangible assets as of April 30, 2020, based on their current useful lives, is as follows (in thousands):

	Amortization Expense
2020 (remainder of fiscal year)	$ 6,324
2021	19,965
2022	11,143
2023	3,799
2024	2,379
Thereafter	2,421
Total future amortization expense	$ 46,031

Other assets

Other assets consist of the following (in thousands):

	April 30, 2020	July 31, 2019
Prepaid expenses	$ 2,753	$ 2,640
Contract costs	22,389	23,375
Deferred costs	6,541	8,867
Strategic investment	—	10,672
Other assets	$ 31,683	$ 45,554

The Company's other assets includes a strategic equity investment in a privately-held company. The strategic investment is a non-marketable equity security, in which the Company does not have a controlling interest or the ability to exert significant influence. This investment does not have a readily determinable market value. The Company records this strategic investment at cost less impairment and adjusts cost for subsequent observable changes in fair value. The Company recognized an impairment charge of $10.7 million as of April 30, 2020 primarily due to liquidity constraints in the current economic environment.

Accrued Employee Compensation

Accrued employee compensation consists of the following (in thousands):

	April 30, 2020	July 31, 2019
Bonus	$ 14,618	$ 37,628
Commission	3,117	10,317
Vacation	17,730	14,511
Salaries, payroll taxes and benefits	12,028	10,909
Accrued employee compensation	$ 47,493	$ 73,365

Other Current Liabilities

Other current liabilities consist of the following (in thousands):

	April 30, 2020	July 31, 2019
Lease liabilities	$ 9,922	$ —
Accrued royalties	4,700	5,573
Accrued taxes	2,790	4,413
Other	4,377	6,362
Other current liabilities	$ 21,789	$ 16,348

5. Net Income (Loss) Per Share

The following table sets forth the computation of the Company’s basic and diluted net income (loss) per share (in thousands, except share and per share amounts):

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2020	2019	2020	2019
Numerator:				
Net income (loss)	$ (31,038)	$ (8,581)	$ (65,973)	$ (2,273)
Net income (loss) per share:				
Basic	$ (0.37)	$ (0.11)	$ (0.80)	$ (0.03)
Diluted	$ (0.37)	$ (0.11)	$ (0.80)	$ (0.03)
Denominator:				
Weighted average shares used in computing net income (loss) per share:				
Basic	83,024,291	81,606,088	82,701,267	81,252,993
Weighted average effect of dilutive stock options	—	—	—	—
Weighted average effect of dilutive stock awards	—	—	—	—
Diluted	83,024,291	81,606,088	82,701,267	81,252,993

The following weighted average shares of potential common stock were excluded from the computation of diluted income (loss) per share for the periods presented because including them would have been anti-dilutive:

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2020	2019	2020	2019
Stock options	146,617	334,909	180,243	413,145
Stock awards	1,751,083	2,638,973	2,589,517	2,215,378

Since the Company has the intent and ability to settle the principal amount of the Convertible Senior Notes in cash and any excess in shares of the Company’s common stock, the Company uses the treasury stock method for calculating any potential dilutive effect of the conversion spread on net income (loss) per share, if applicable. The conversion spread will have a dilutive impact on net income (loss) per share when the average market price of the Company’s common stock for a given period exceeds the conversion price of $113.75 per share for the Convertible Senior Notes. During the three and nine months ended April 30, 2020 and 2019, the Company’s weighted average common stock price was below the conversion price of the Convertible Senior Notes.

6. Convertible Senior Notes

In March 2018, the Company offered and sold $400.0 million aggregate principal amount of its 1.25% Convertible Senior Notes due 2025. The Convertible Senior Notes were issued in accordance with the Indenture, dated as of March 13, 2018, between the Company and U.S. Bank National Association, as trustee (the “Trustee”) (the “Base Indenture”), as amended and supplemented by the First Supplemental Indenture, dated as of March 13, 2018, between the Company and the Trustee (together with the Base Indenture, the “Indenture”). The net proceeds from the issuance of the Convertible Senior Notes were $387.2 million, after deducting issuance costs.

The Convertible Senior Notes are unsecured obligations of the Company with interest payable semi-annually in arrears at a rate of 1.25% per year, on March 15th and September 15th of each year beginning on September 15, 2018. The Convertible Senior Notes will mature on March 15, 2025 unless repurchased, redeemed, or converted prior to such date. Prior to the close of business on the business day immediately preceding October 15, 2024, the Convertible Senior Notes are convertible at the option of holders during certain periods, upon satisfaction of certain conditions. On or after October 15, 2024, the Convertible Senior Notes are convertible at any time until the close of business on the second scheduled trading day immediately preceding the maturity date. The Convertible Senior Notes will have an initial conversion rate of 8.7912 shares of common stock per $1,000 principal (equivalent to an initial conversion price of approximately $113.75 per share of the Company's common stock). The conversion rate is subject to customary adjustments upon the occurrence of certain events but will not be adjusted for any accrued and unpaid interest. Upon conversion, the Company will pay or deliver, as the case may be, cash, shares of its common stock or a combination of cash and shares of its common stock, at its election.

The Company may redeem the Convertible Senior Notes, at its option, on or after March 20, 2022, at a redemption price equal to 100% of the principal amount thereof, plus accrued and unpaid interest if the last reported sale price of the Company’s common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive), including at least one of the three trading days immediately preceding the date on which the Company provides notice of redemption, during any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which the Company provides notice of redemption. No sinking fund is provided for the Convertible Senior Notes. Upon the occurrence of a fundamental change (as defined in the Indenture) prior to the maturity date, holders may require the Company to repurchase all or a portion of the Convertible Senior Notes for cash at a price equal to 100% of the principal amount of the notes to be repurchased, plus any accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

The Convertible Senior Notes rank senior in right of payment to any of the Company’s indebtedness that is expressly subordinated in right of payment to the Convertible Senior Notes, and equal in right of payment to any of its indebtedness that is not so subordinated. The Convertible Senior Notes are effectively junior in right of payment to any of the Company’s secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all indebtedness and other liabilities (including trade payables) and any preferred equity of its current or future subsidiaries.

The net carrying value of the liability component, unamortized debt discount and issuance costs of the Convertible Senior Notes was as follows (in thousands):

	April 30, 2020	July 31, 2019
Principal	$ 400,000	$ 400,000
Less unamortized:		
Debt discount	65,489	74,213
Debt issuance cost	7,591	8,465
Net carrying amount	$ 326,920	$ 317,322

The effective interest rate of the liability is 5.53%. The following table sets forth the interest expense recognized related to the Convertible Senior Notes (in thousands):

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2020	2019	2020	2019
Contractual interest expense	$ 1,250	$ 1,250	$ 3,750	$ 3,750
Amortization of debt discount	2,945	2,801	8,724	8,296
Amortization of debt issuance costs	299	269	874	787
Total	$ 4,494	$ 4,320	$ 13,348	$ 12,833

Capped Call

In March 2018, the Company paid $37.2 million to purchase capped calls with certain financial institutions pursuant to capped call confirmations (the “Capped Calls”). The Capped Calls have an initial strike price of $113.75 per share, subject to certain adjustments, which corresponds to the initial conversion price of the Convertible Senior Notes. The Capped Calls have initial cap prices of $153.13 per share, subject to certain adjustments. The Capped Calls cover, subject to anti-dilution adjustments, 3.5 million shares of common stock. By entering into the Capped Calls, the Company expects to reduce the potential dilution to its common stock (or, in the event the conversion is settled in cash, to reduce its cash payment obligation) in the event that at the time of conversion its stock price exceeds the conversion price under the Convertible Senior Notes. The Capped Calls are subject to either adjustment or termination upon the occurrence of specified extraordinary events affecting the Company, including a merger event, tender offer, and a nationalization, insolvency, or delisting involving the Company. Additionally, the Capped Calls are subject to certain specified additional disruption events that may give rise to a termination of the Capped Calls, including change in law, insolvency filing, and hedging disruptions. The Capped Calls were recorded in the periods purchased as a reduction of the Company’s additional paid-in capital in the condensed consolidated balance sheets.

7. Leases

The Company's lease obligations consist of operating leases for office facilities and equipment, with lease periods expiring between fiscal years 2020 and 2032. Some leases include one or more options to renew. Lease renewals are not assumed in the determination of the lease term until the exercise of the renewal option is deemed to be reasonably certain.

Components of operating lease costs were as follows (in thousands):

	Three Months Ended April 30, 2020	Nine Months Ended April 30, 2020
Operating lease cost[(1)]	$ 3,802	$ 11,544
Variable lease cost	1,396	4,031
Sublease income	(382)	(1,144)
Net operating lease cost	$ 4,816	$ 14,431

(1) Lease expense for leases with an initial term of 12 months or less is excluded from the table above and was $0.3 million and $1.0 million for the three and nine months ended April 30, 2020, respectively.

Lease expense for all worldwide facilities and equipment based on the previous lease accounting standards, which was recognized on a straight-line basis over the terms of the various leases, was $4.8 million and $10.8 million for the three and nine months ended April 30, 2019, respectively.

Future operating lease payments as of April 30, 2020 and July 31, 2019 were as follows (in thousands):

	April 30, 2020	July 31, 2019
2020 (remaining of fiscal year)	$ 4,072	$ 10,707
2021	16,346	15,571
2022	15,038	14,450
2023	13,515	13,344
2024	13,138	13,174
Thereafter	73,444	78,508
Total future lease payments	135,553	145,754
Less imputed interest	(26,521)	
Total lease liability balance	$ 109,032	

In early March 2020, the Company entered into additional operating leases for facilities in Dublin, Ireland and Mississauga, Canada with lease obligations of approximately $36.8 million payable over a period of 12 years. These operating leases will commence upon taking control of the facilities, which is anticipated to be between May 2020 and July 2021.

Supplemental information related to leases was as follows (in thousands, except for lease term and discount rate):

	April 30, 2020
Operating lease assets	$ 85,902
Current portion of lease liabilities	$ 9,922
Non-current portion of lease liabilities	99,110
Total lease liabilities	$ 109,032
Weighted average remaining lease term (years)	9.07
Weighted average discount rate	4.36 %

Supplemental cash and non-cash information related to operating leases was as follows (in thousands):

	Three Months Ended April 30, 2020	Nine Months Ended April 30, 2020
Cash payments for operating leases	$ 4,361	$ 8,945
Operating lease assets obtained in exchange for lease liabilities	$ 114	$ 600

8. Commitments and Contingencies

There has been no material change in the Company’s contractual obligations and commitments other than in the ordinary course of business since the Company’s fiscal year ended July 31, 2019, except for the new office facilities leases in Dublin, Ireland and Mississauga, Canada that were signed in early March 2020. The Company has not taken control of these new office facilities as of April 30, 2020. See the Annual Report on Form 10-K for the fiscal year ended July 31, 2019 for additional information regarding the Company’s contractual obligations.

Legal Proceedings

From time to time, the Company is involved in various legal proceedings and receives claims, arising from the normal course of business activities. The Company has not accrued for estimated losses in the accompanying condensed consolidated financial statements as the Company has determined that no provision for liability nor disclosure is required related to any claim against the Company because: (a) there is not a reasonable possibility that a loss exceeding amounts already recognized (if any) may be incurred with respect to such claim; (b) a reasonably possible loss or range of loss cannot be estimated; or (c) such estimate is immaterial. The Company has not recorded any accrual for claims as of April 30, 2020 or July 31, 2019. The Company expenses legal fees in the period in which they are incurred.

Indemnification

The Company sells software licenses and services to its customers under Software License Agreements ("SLA") and Software Subscription Agreements ("SSA"). SLAs and SSAs contain the terms of the contractual arrangement with the customer and generally includes certain provisions for defending the customer against any claims that the Company's software infringes upon a patent, copyright, trademark, or other proprietary right of a third party. SLAs and SSAs also generally indemnify the customer against judgments, settlements, fines, penalties, costs, and expenses resulting from a claim ("Losses") against the customer in the event the Company's software is found to infringe upon such third-party rights.

The Company has not had to reimburse any of its customers for Losses related to indemnification provisions and no material claims against the Company were outstanding as of April 30, 2020 or July 31, 2019. For several reasons, including the lack of prior indemnification claims and the lack of a monetary liability limit for certain infringement cases under various SLAs and SSAs, the Company cannot estimate the amount of potential future payments, if any, related to indemnification provisions.

The Company has also agreed to indemnify its directors and executive officers for costs associated with any fees, expenses, judgments, fines, and settlement amounts incurred by any of these persons in any action or proceeding to which any of these persons is, or is threatened to be, made a party by reason of the person's service as a director or officer, including any action by the Company, arising out of that person's services as the Company's director or officer or that person's services provided to any other company or enterprise at the Company's request. The Company maintains director and officer insurance coverage that may enable the Company to recover a portion of any future amounts paid.

9. Stock-Based Compensation Expense and Shareholders' Equity

Stock-Based Compensation Expense

Stock-based compensation expense related to stock options and Stock Awards is included in the Company's condensed consolidated statements of operations as follows (in thousands):

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2020	2019	2020	2019
Stock-based compensation expense	$ 24,905	$ 21,130	$ 76,358	$ 68,669
Net impact of deferred stock-based compensation	(124)	(80)	(283)	88
Total stock-based compensation expense	$ 24,781	$ 21,050	$ 76,075	$ 68,757
Stock-based compensation expense is included in the following categories:				
Cost of license and subscription revenue	$ 1,694	$ 589	$ 4,674	$ 1,458
Cost of maintenance revenue	469	274	1,376	1,366
Cost of services revenue	4,862	5,721	15,663	17,899
Research and development	6,500	4,919	19,349	17,765
Sales and marketing	4,990	4,731	16,143	14,426
General and administrative	6,266	4,816	18,870	15,843
Total stock-based compensation expense	$ 24,781	$ 21,050	$ 76,075	$ 68,757

Total unrecognized stock-based compensation expense as of April 30, 2020 related to stock options and Stock Awards is as follows:

	Unrecognized Expense (in thousands)	Weighted Average Expected Recognition Period (in years)
Stock Options	$ 958	0.9
Stock Awards	208,852	2.5
	$ 209,810	

Stock Awards

A summary of the Company's Stock Awards activity under the Company's equity incentive plans is as follows:

	Stock Awards Outstanding		
	Number of Stock Awards Outstanding	Weighted Average Grant Date Fair Value	Aggregate Intrinsic Value (in thousands)(1)
Balance as of July 31, 2019	2,384,673	$ 85.20	$ 243,427
Granted	1,367,381	$ 106.68	
Released	(966,699)	$ 81.50	$ 95,938
Canceled	(281,212)	$ 86.19	
Balance as of April 30, 2020	2,504,143	$ 97.52	$ 227,476
Expected to vest as of April 30, 2020	2,504,143	$ 97.52	$ 227,476

(1) Aggregate intrinsic value at each period end represents the total market value of Stock Awards at the Company's closing stock price of $90.84 and $102.08 on April 30, 2020 and July 31, 2019, respectively. Aggregate intrinsic value for released Stock Awards represents the total market value of released Stock Awards at date of release.

Certain executives and employees of the Company received PSUs and TSR PSUs in addition to RSUs. The PSUs included performance-based conditions and generally vest over a four-year period. The TSR PSUs are subject to total shareholder return rankings of the Company's common stock relative to the software companies in the S&P Index for a specified period or periods, and vest at the end of three years. In select cases, certain TSR PSUs are also subject to performance-based conditions. The Company recognized stock-based compensation related to these performance-based and market-based stock awards of $2.3 million and $2.4 million for the three months ended April 30, 2020 and 2019, respectively, and $9.5 million and $9.5 million for the nine months ended April 30, 2020 and 2019, respectively.

Stock Options

Stock option activity under the Company's equity incentive plans is as follows:

	Stock Options Outstanding			
	Number of Stock Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value (1)
			(in years)	(in thousands)
Balance as of July 31, 2019	216,727	$ 34.10	5.2	$ 14,733
Granted	—			
Exercised	(88,328)	$ 34.85		$ 5,970
Canceled	(3,822)	$ 10.99		
Balance as of April 30, 2020	124,577	$ 34.28	5.1	$ 7,046
Vested and expected to vest as of April 30, 2020	124,577	$ 34.28	5.1	$ 7,046
Exercisable as of April 30, 2020	109,915	$ 37.38	4.9	$ 5,877

(1) Aggregate intrinsic value at each period end represents the difference between the Company's closing stock prices of $90.84 and $102.08 on April 30, 2020 and July 31, 2019, respectively, and the exercise price of outstanding options. Aggregate intrinsic value for exercised options represents the difference between the Company's stock price at date of exercise and the exercise price.

Valuation of Awards

TSR PSUs

The fair value of TSR PSUs is estimated at the date of grant using the Monte Carlo simulation model which included the following assumptions:

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2020	2019	2020	2019
Expected term (in years)	*	*	2.90	2.88
Risk-free interest rate	*	*	1.5%	2.8%
Expected volatility of the Company	*	*	28.4%	27.2%
Average expected volatility of the peer companies in the S&P Index	*	*	37.0%	33.0%
Expected dividend yield	*	*	—%	—%

*There were no TSR PSUs granted during the three months ended April 30, 2020 and 2019.

The number of TSR PSUs that may ultimately vest will vary based on the performance of the Company’s common stock relative to the shareholder return of the software companies in the S&P Index for a specified period or periods. The Monte Carlo methodology incorporates into the valuation all possible outcomes, including that the Company’s relative performance may result in no shares vesting. As a result, stock-based compensation expense is recognized regardless of the Company's ultimate achievement of the plan’s metrics. The expense will be reversed only in the event that a grantee is terminated prior to satisfying the requisite service period.

For a subset of TSR PSUs, the number of shares that may ultimately vest will vary based on the achievement of certain Company specific financial performance metrics in addition to the Company’s total shareholder return metric noted above. As a result, the expense recognized will fluctuate based on the Company’s estimated financial performance relative to the target financial performance metrics.

Common Stock Reserved for Issuance and Public Equity Offering

As of April 30, 2020 and July 31, 2019, the Company was authorized to issue 500,000,000 shares of common stock with a par value of $0.0001 per share and, of these, 83,167,042 and 82,140,883 shares of common stock were issued and outstanding, respectively. Per the terms of the Company’s 2011 Stock Plan, on January first of each year, an additional number of shares equal to 5% of the number of shares of common stock issued and outstanding on the preceding December 31st may be added to the Company’s 2011 Stock Plan reserve. The Company elected not to increase the number of shares of common stock available for grant under this plan for the calendar year ended December 31, 2019. As of April 30, 2020 and July 31, 2019, the Company had reserved shares of common stock for future issuance as follows:

	April 30, 2020	July 31, 2019
Exercise of stock options to purchase common stock	124,577	216,727
Vesting of stock awards	2,504,143	2,384,673
Shares available under stock plans	23,652,427	24,776,361
Total common stock reserved for issuance	26,281,147	27,377,761

10. Income Taxes

The Company recognized an income tax benefit of $5.4 million and $4.4 million for the three months ended April 30, 2020 and 2019, respectively, and an income tax benefit of $7.8 million and $9.0 million for the nine months ended April 30, 2020 and 2019, respectively. The change in the amount of income tax recorded for the three months ended April 30, 2020 compared to the same period a year ago was primarily due to higher losses recognized during the current fiscal quarter. The change in the amount of income tax recorded for the nine months ended April 30, 2020 compared to the same period a year ago was primarily due to the base erosion and anti-abuse tax ("BEAT") liability of $11.3 million recognized during the nine months ended April 30, 2020, of which $5.4 million relates to the current fiscal year and $5.9 million relates to the prior fiscal year, as a result of regulations issued by the Internal Revenue Service (“IRS”) on December 2, 2019. The Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was passed on March 27, 2020 and amended a certain provision of the tax law that reduced the Company's BEAT liability by $1.0 million, which was recorded during the three months ended April 30, 2020. The effective tax rate of 15% and 11% for the three and nine months ended April 30, 2020, respectively, differs from the statutory U.S. federal income tax rate of 21% mainly due to permanent differences for stock-based compensation including excess tax benefits, research and development credits, certain non-deductible expenses including executive compensation, and BEAT.

Due to uncertainties in pending tax regulations that existed earlier in the fiscal year and the recent economic impact of COVID-19 during the third fiscal quarter of 2020, the Company has not been able to reliably estimate the overall annual effective tax rate during fiscal year 2020. As a result we have used the actual effective tax rate in calculating our provision for (benefit from) income taxes during the interim periods of fiscal year 2020.

During the three and nine months ended April 30, 2020, unrecognized tax benefits increased by $0.3 million and $1.0 million, respectively. As of April 30, 2020, the Company had unrecognized tax benefits of $6.9 million that, if recognized, would affect the Company's effective tax rate.

In February 2020, the California Franchise Tax Board notified the Company that they will be reviewing fiscal year 2017 and 2018 state income tax returns.

11. Segment Information

The Company operates in one segment. The Company's chief operating decision maker (the "CODM"), its Chief Executive Officer, manages the Company's operations on a consolidated basis for purposes of allocating resources. When evaluating the Company's financial performance, the CODM reviews separate revenue information for the Company's term license, perpetual license, subscription, maintenance, and services offerings, while all other financial information is reviewed on a consolidated basis. The Company's principal operations and decision-making functions are located in the United States.

The Company's long-lived assets, including intangibles and goodwill, net by geographic region is as follows (in thousands):

	April 30, 2020	July 31, 2019
Americas	$ 445,895	$ 468,545
EMEA	4,942	4,633
APAC	1,532	50
Total	$ 452,369	$ 473,228

ITEM 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis should be read in conjunction with our condensed consolidated financial statements and the notes thereto included elsewhere in this Quarterly Report on Form 10-Q and the Risk Factors included in Item 1A of Part II of this Quarterly Report on Form 10-Q. All information presented herein is based on our fiscal calendar. Unless otherwise stated, references in this report to particular years or quarters refer to our fiscal years ended in July and the associated quarters of those fiscal years. We assume no obligation to revise or update any forward-looking statements for any reason, except as required by law.

Overview

We provide a technology platform, composed of software, services, and a partner ecosystem, for the global Property and Casualty ("P&C") insurance industry.

Guidewire InsurancePlatform™ consists of the Guidewire Cloud and customer self-managed applications to support core operations, data management and analytics, and digital engagement, and is connected to numerous data sources and third-party applications. Our applications are designed to work together to strengthen our customers’ ability to adapt and succeed in a rapidly changing market. Guidewire InsuranceSuite™ and Guidewire InsuranceNow™ provide core transactional systems of record supporting the entire insurance life-cycle, including product definition, distribution, underwriting, policy-holder services, and claims management. Guidewire InsuranceSuite is a highly configurable and scalable system primarily comprised of three applications (PolicyCenter, BillingCenter, and ClaimCenter) that can be licensed separately or together and can be self-managed or deployed in the cloud. Guidewire InsuranceNow is a cloud-based system that offers policy, billing, and claims management functionality to insurers that prefer an all-in-one solution. Our data and analytics applications enable insurers to manage data more effectively, gain insights into their business, and underwrite new and evolving risks. Our digital engagement applications enable digital sales, omni-channel service and enhanced claims experiences for policyholders, agents, vendor partners, and field personnel. To support P&C insurers globally, we have localized, and will continue to localize, our software for use in a variety of international regulatory, language, and currency environments.

We sell our products to a wide variety of global P&C insurers ranging from some of the largest global insurance carriers or their subsidiaries to national and regional carriers. Our customer engagement is led by our direct sales team and supported by our system integrator (“SI”) partners. We maintain and continue to grow our sales and marketing efforts globally, and maintain regional sales centers in the Americas, Europe and Asia. Strong customer relationships are a key driver of our success given the long-term nature of our engagements and the importance of customer references for new sales. We continue to focus on deepening our customer relationships through continued successful product implementations, robust product support, strategic engagement on new products and technologies, and ongoing account management.

Our sales cycles for new and existing customers remain protracted as customers are deliberate and the decision making and product evaluation process is long. These evaluation periods can extend further if the customer purchases multiple products or assesses the benefits of a cloud-based subscription in addition to our more traditional self-managed licensing models. Sales to new customers also involve extensive customer due diligence and reference checks. The success of our sales efforts relies on continued improvements and enhancements to our current products, the introduction of new products, efficient operation of our cloud infrastructure, the continued development of relevant local content and the creation of automated tools for updating content. Additionally, we maintain and grow our credibility with each successful implementation.

Historically, we licensed our software under term license contracts. We generally price our licenses based on the amount of direct written premiums (“DWP”) that will be managed by our solutions. Our term license and maintenance fees are typically invoiced annually in advance. Term licenses are primarily sold with an initial two-year committed term with optional annual renewals commencing after the initial term. We may enter into term license arrangements with our customers that have an initial term of more than two years or may renew license arrangements for longer than one year. A small portion of our revenue is derived from perpetual licenses. Term and perpetual license revenue are typically recognized when software is made available to the customer, provided that all other revenue recognition criteria have been met.

More recently, we have primarily been entering into cloud-based subscriptions with our new and existing customers. Generally, these subscriptions have an initial term of three to five years, and are typically billed annually in advance, although in some instances additional fees may be assessed in arrears as customers increase their DWP. Revenue derived from these subscriptions is recognized ratably over the contractual term beginning after the subscription is effectively provisioned, which is the date our software service is made available to customers. We anticipate that subscriptions will be a majority of annual new sales going forward. As a result of the ratable recognition of revenue associated with subscriptions, a significant shift from term licenses to subscriptions will adversely affect our reported revenue growth. As this sales model matures, we may decide to change certain contract terms in new arrangements to remain competitive or otherwise meet market demands.

To extend our technology leadership in the global market and to drive operating efficiency, we continue to invest in product development and cloud operations to enhance and improve our current products, introduce new products, and advance our ability to cost-effectively deliver each of our products in the cloud. Continued investment is critical as we seek to assist our customers in achieving their technology goals, maintain our competitive advantage, grow our revenue, expand internationally, and meet evolving customer demands. In certain cases, we may also acquire skills and technologies to manage our cloud infrastructure and accelerate our time to market for new products and solutions.

Our track record of success with customers and their implementations is central to maintaining our strong competitive position. We rely on our services teams and SI partners to meet our customers' implementation needs. Our services organization is comprised of on-site, near-shore, and off-shore technical experts. The services organization seeks to ensure that teams with the right combination of product and language skills are used in the most efficient way. Our partnerships with leading SIs allow us to increase efficiency and scale while reducing customer implementation costs. Our extensive relationships with SIs and industry partners have strengthened and expanded in line with the interest in and adoption of our products and services. We encourage our partners to co-market, pursue joint sales initiatives, and drive broader adoption of our technology, helping us grow our business more efficiently. We continue to grow our services organization and invest time and resources to increase the number of qualified consultants employed by our SI partners, develop relationships with new SIs in existing and new markets, and ensure that all partners are qualified to assist with implementing our products.

We face a number of risks in the execution of our strategy including risks related to expanding to new markets, managing lengthy sales cycles, competing effectively in the global market, relying on sales to a relatively small number of large customers, developing new or acquiring existing products successfully, migrating our business towards a subscription model with ratable revenue recognition, increasing the overall adoption of our products, and managing the infrastructure for our cloud-based customers. In response to these and other risks we might face, we continue to invest in many areas of our business. Our investments in sales and marketing align with our goal of winning new customers in both existing and new markets, and enable us to maintain a persistent, consultative relationship with our existing customers. Our investments in product development are designed to meet the evolving needs of our customers. Our investments in services and partners are designed to ensure customer success by committing additional resources to both self-managed and cloud-based implementation projects. Our investments in cloud operations are focused on managing the infrastructure for our cloud-based customers in a secure, efficient, and cost-effective manner.

Seasonality

We have experienced seasonal variations in our license and subscription revenue as a result of increased customer orders in our fourth fiscal quarter. We see significantly increased orders in our fourth fiscal quarter, which is the quarter ending July 31, due to efforts by our sales team to achieve annual incentives. Additionally, the adoption of new revenue guidance in fiscal 2019, also referred to as ASC 606, could heighten or change the seasonal impact as our new term licenses and certain renewals are multi-year in nature with more revenue recognized upfront based on the length of the committed term. To a lesser extent, we have seen a modest increase in orders in our second fiscal quarter, which is the quarter ending January 31, due to customer buying patterns. These seasonal patterns, however, may be absent in any given year. For example, in the first quarter of fiscal year 2019, we experienced license revenue growth due to a 10-year term license deal under which revenue was recognized upfront in the first quarter of fiscal year 2019 under ASC 606, which overshadowed the usual positive seasonal impact in our second quarter of fiscal year 2019 and set up a challenging comparable period for the first quarter of fiscal year 2020. On an annual basis, our maintenance revenue, which is recognized ratably, may also be impacted in the event that seasonal patterns change significantly. Additionally, as subscriptions increase as a percentage of total sales, the revenue we can recognize in the initial fiscal year of an order will be reduced, deferred revenue will increase, and our reported revenue growth will be adversely affected in the near term due to the ratable nature of these arrangements. The seasonal nature of our sales and the concentration of such sales in our fiscal fourth quarter increases this impact.

Our services revenue is also subject to seasonal fluctuations, though to a lesser degree than our license revenue. Our services revenue is impacted by the number of billable days in a given fiscal quarter. The quarter ending January 31 usually has fewer billable days due to the impact of the Thanksgiving, Christmas, and New Year's holidays. The fiscal quarter ending July 31 usually has fewer billable days due to the impact of vacations taken by our professional staff. Because we pay our services professionals the same amount throughout the year, our gross margins on our services revenue is usually lower in these quarters. This seasonal pattern, however, may be absent in any given year.

COVID-19 Impact

In March 2020, the World Health Organization declared the outbreak of COVID-19, a pandemic that continues to spread throughout the United States and the world and has resulted in authorities implementing numerous measures to contain the virus, including travel bans and restrictions, quarantines, shelter-in-place orders, and business limitations and shutdowns. While we are unable to accurately predict the full impact that COVID-19 will have on our results of operations, financial condition, liquidity, and cash flows due to numerous uncertainties, including the duration and severity of the pandemic and containment measures, our compliance with these measures has impacted our day-to-day operations and could disrupt our business and operations, as well as that of our key customers, SI partners, vendors, and other counterparties, for an indefinite period of time. To support the health and well-being of our employees, customers, SI partners and communities, a vast majority of our employees are working remotely. In addition, many of our existing and potential customers are working remotely, which may delay the timing of new orders and professional services engagements during the three months ended July, 31 2020 and beyond.

Our business and financial results for the third fiscal quarter of 2020 were impacted due to these disruptions, including decreases in annual recurring revenue ("ARR") growth rates, services revenue and margins, free cash flow as a result of an early partial bonus payout, and the change in fair value of a strategic investment. We currently expect that ARR and revenue, especially services revenue, for the fourth fiscal quarter of 2020 will continue to be impacted as a result of the challenges related to our compliance with government-mandated or recommended shelter-in-place orders in jurisdictions in which we, our customers, SI partners and vendors operate. For example, we or our SI partners may not be able to visit customer facilities to make sales visits or to complete implementation engagements.

We currently believe these disruptions are temporary, however, we may continue to be adversely impacted as a result of the pandemic's global economic impact. We believe that new sales activities are being delayed, not cancelled and implementation engagements are being rescheduled to later periods. Certain marketing events have or will be cancelled or postponed, while others are being hosted virtually. Our customers may be unable to pay or may request amended payment terms for their outstanding invoices due to the economic impacts from COVID-19, and we may need to increase allowance for doubtful accounts and revenue reserves. Also, a decrease in orders in a given period could negatively affect our revenues and ARR in future periods, particularly if experienced on a sustained basis, because a substantial proportion of our new software subscription services orders is recognized as revenue over time. We may be required to record impairment related to our operating lease assets, investments, long-lived assets, or goodwill. We will continue to evaluate the nature and extent of the impact of COVID-19 on our business.

Key Business Metrics

We use certain key metrics and financial measures not prepared in accordance with United States Generally Accepted Accounting Principles ("GAAP") to evaluate and manage our business, including Free Cash Flow and Annual Recurring Revenue ("ARR"). For a further discussion of how we use key metrics and certain non-GAAP financial measures, see "Non-GAAP Financial Measures."

Free Cash Flow

We monitor our free cash flow, as a key measure of our overall business performance, which enables us to analyze our financial performance without the effects of certain non-cash items such as depreciation, amortization, and stock-based compensation expenses. Additionally, free cash flow takes into account the impact of changes in deferred revenue, which reflects the receipt of cash for products before they are recognized as revenue, and unbilled accounts receivable, which reflects revenue that has been recognized that has yet to be invoiced to our customers. Our net cash provided by (used in) operating activities is significantly impacted by the timing of invoicing and collections of accounts receivable, the timing and amount of annual bonus payments, as well as payroll and tax payments. Our capital expenditures consists of purchases of property and equipment, primarily computer hardware, software, and leasehold improvements, and capitalized software development costs. Free cash flow was impacted by a $9.9 million partial early bonus payout during the nine months ended April 30, 2020. This partial early bonus payout was approved by our board of directors in order to support our employees and, in turn, their local economies during the extraordinary situation created by the COVID-19 pandemic. The build out and furnishing of our corporate headquarters in San Mateo, California impacted free cash flow by $13.8 million and $22.2 million for the nine months ended April 30, 2020 and 2019, respectively. For a further discussion of our operating cash flows, see "Liquidity and Capital Resources - Cash Flows."

	Nine Months Ended April 30,	
	2020	2019
Net cash provided by (used in) operating activities	$ 5,907	$ 13,252
Purchases of property and equipment	(18,966)	(28,746)
Capitalized software development costs	(3,273)	(2,302)
Free cash flow	$ (16,332)	$ (17,796)

Annual Recurring Revenue

We use Annual Recurring Revenue ("ARR") to identify the annualized recurring value of active customer contracts at the end of a reporting period. ARR includes the annualized recurring value of term licenses, subscription agreements, maintenance contracts, and hosting agreements based on customer contracts, which may not be the same as the timing and amount of revenue recognized. All components of the licensing and usage arrangements that are not expected to recur (primarily perpetual licenses and services) are excluded. If a customer contract contains invoicing amounts that change over the contract term, then ARR reflects the annualized invoicing amount outlined in the contract for the current reporting period. For example, given a contract with annual invoicing of $1.0 million at the beginning of year one, $2.0 million at the beginning of year two, and $3.0 million at the beginning of year three, and the reporting period is subsequent to year two invoicing and prior to year three invoicing, the reported ARR for that contract would be $2.0 million.

Our reported quarterly ARR results for fiscal year 2020 are based on actual currency rates at the end of fiscal year 2019, held constant throughout the year. ARR was $483 million as of April 30, 2020, up from $460 million as of July 31, 2019.

Critical Accounting Policies and Estimates

Our condensed consolidated financial statements are prepared in accordance with GAAP. Accounting policies, methods, and estimates are an integral part of the preparation of condensed consolidated financial statements in accordance with GAAP and, in part, are based upon management's current judgments. Those judgments are normally based on knowledge and experience with regard to past and current events and assumptions about future events. Certain accounting policies, methods and estimates are particularly sensitive because of their significance to the condensed consolidated financial statements and because of the possibility that future events affecting them may differ markedly from management's current judgments. While there are a number of significant accounting policies, methods, and estimates affecting our condensed consolidated financial statements, which are described in Note 1 "The Company and Summary of Significant Accounting Policies and Estimates" to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q, our revenue recognition policies are particularly critical to fiscal years 2020 and 2019.

While we continue to evaluate our significant accounting policies to determine which ones involve the most judgment and complexity, there have been no changes to our significant accounting policies as described in our Annual Report on Form 10-K for the fiscal year ended July 31, 2019 that have had a material impact on our condensed consolidated financial statements and related notes except for the adoption of ASU No. 2016-02, Leases (Topic 842) and subsequent amendments to the initial guidance: ASU No. 2017-13, ASU No. 2018-10, and ASU No. 2018-11 (collectively, "ASC 842").

Revenue Recognition

Revenue recognition requires judgment and the use of estimates, especially in identifying and evaluating the various non-standard terms and conditions in our contracts with customers as to their effect on reported revenue.

Our revenue is derived from contracts with customers. The majority of our revenue is derived from licensing arrangements that can span multiple years, subscriptions for our cloud services, and implementation and other professional services arrangements. On August 1, 2018, we adopted ASC 606 using the modified retrospective method and recorded a net cumulative effect adjustment of $44.3 million. The core principle of ASC 606 is to recognize revenue upon the transfer of services or products to customers in an amount that reflects the consideration we expect to be entitled to in exchange for those services or products. We apply a five-step framework to recognize revenue as described in our Revenue Recognition policy included in Note 1 of our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Our customers have significant negotiating power during the sales process which can and does result in terms and conditions that are different from our standard terms and conditions. When terms and conditions of our customer contracts are not standard, certain negotiated terms may require significant judgment in order to determine the transaction price, the allocation thereof to the performance obligations identified in the contract and the timing of revenue recognition.

The estimates and assumptions requiring significant judgment under our revenue policy in accordance with ASC 606 are as follows:

Identification of the contract, or contracts, with the customer

Contracts may be modified to account for changes in contract scope or price. We consider contract modifications to exist when the modification either creates new rights or obligations or changes the existing enforceable rights and obligations of either party. Contract modifications for products and services that are distinct from the existing contract and are priced commensurate with their standalone selling price are treated as separate contracts, and are accounted for prospectively. Contract modifications for products and services that are distinct but are not priced commensurate with their standalone selling price or are not distinct from the existing contract may affect the initial transaction price or the allocation of the transaction price to the performance obligations in the contract. In such cases, revenue recognized may be adjusted.

Determination of the transaction price

The transaction price is determined based on the consideration to which we expect to be entitled in exchange for transferring services and products to our customer. Variable consideration is estimated and included in the transaction price if, in our judgment, it is probable that there will not be a significant future reversal of cumulative revenue under the contract.

Self-managed software licenses and subscription services may be subject to either fixed or variable installments. Variable installments are generally subject to changes in a customer's DWP or a customer's Gross Written Premium ("GWP"). When consideration is subject to variable installments, we estimate variable consideration using the expected value method based on historical DWP or GWP usage to the extent that a significant revenue reversal is not probable to occur. When consideration is subject to a customer termination right, we estimate the total transaction price using the most likely method, and defer consideration associated with the customer's termination right until it expires.

We evaluate whether a significant financing component exists when the timing of revenue recognition occurs in advance of invoicing. This timing difference occurs when control of the software license is transferred at a point in time, usually at the contract onset, but the customer payments occur over time. A significant financing component generally does not exist under our standard contracting and billing practices. For example, our typical time-based licenses have a two-year initial term with the final payment due at the end of the first year.

Allocation of the transaction price to the performance obligations in the contract

If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple performance obligations require an allocation of the transaction price to each performance obligation based on its standalone selling price ("SSP") in relation to the total fair value of all performance obligations in the arrangement. The majority of our contracts contain multiple performance obligations, such as when licenses are sold with maintenance, implementation services or training services. Additionally, as customers transition to subscription services, our customers may be under contract for both self-managed licenses and subscription services for a period of time, which may require an allocation of the transaction price to each performance obligation. Some of our performance obligations, such as maintenance, implementation services, and training services, have observable inputs that are used to determine the SSP of those distinct performance obligations. Where SSP is not directly observable, we determine the SSP using information that may include market conditions and other observable inputs. In the circumstances when available information to determine SSP is highly variable or uncertain, such as for our term licenses, we use the residual method.

Results of Operations

The following table sets forth our results of operations for the periods presented. The data has been derived from the condensed consolidated financial statements contained in this Quarterly Report on Form 10-Q which, in the opinion of our management, reflect all adjustments, consisting only of normal recurring adjustments, necessary to fairly present the financial position and results of operations for the interim periods presented. The operating results for any period should not be considered indicative of results for any future period. This information should be read in conjunction with the consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the fiscal year ended July 31, 2019.

	Three Months Ended April 30,			
	2020	As a % of total revenue	2019	As a % of total revenue
	(in thousands, except percentages)			
Revenue:				
License and subscription	$ 93,182	56 %	$ 76,218	47 %
Maintenance	20,694	12	21,335	13
Services	54,289	32	65,314	40
Total revenue	168,165	100	162,867	100
Cost of revenue:				
License and subscription	28,713	17	15,781	10
Maintenance	4,375	3	3,924	2
Services	52,664	31	60,573	38
Total cost of revenue	85,752	51	80,278	50
Gross profit:				
License and subscription	64,469	39	60,437	37
Maintenance	16,319	9	17,411	11
Services	1,625	1	4,741	2
Total gross profit	82,413	49	82,589	50
Operating expenses:				
Research and development	51,893	30	47,102	29
Sales and marketing	35,235	21	33,301	20
General and administrative	20,885	12	17,953	11
Total operating expenses	108,013	63	98,356	60
Income (loss) from operations	(25,600)	(14)	(15,767)	(10)
Interest income	6,072	3	7,748	5
Interest expense	(4,505)	(3)	(4,327)	(3)
Other income (expense), net	(12,356)	(7)	(617)	—
Income (loss) before provision for (benefit from) income taxes	(36,389)	(21)	(12,963)	(8)
Provision for (benefit from) income taxes	(5,351)	(3)	(4,382)	(3)
Net income (loss)	$ (31,038)	(18)%	$ (8,581)	(5)%

	Nine Months Ended April 30,			
	2020	As a % of total revenue	2019	As a % of total revenue
	(in thousands, except percentages)			
Revenue:				
License and subscription	$ 280,559	56 %	$ 257,611	51 %
Maintenance	62,781	13	63,602	12
Services	155,293	31	190,443	37
Total revenue	498,633	100	511,656	100
Cost of revenue:				
License and subscription	79,541	16	43,850	8
Maintenance	12,153	2	11,746	2
Services	158,510	32	185,970	36
Total cost of revenue	250,204	50	241,566	46
Gross profit:				
License and subscription	201,018	40	213,761	43
Maintenance	50,628	11	51,856	10
Services	(3,217)	(1)	4,473	1
Total gross profit	248,429	50	270,090	54
Operating expenses:				
Research and development	148,343	30	139,069	27
Sales and marketing	105,590	21	96,793	19
General and administrative	62,723	13	53,839	10
Total operating expenses	316,656	64	289,701	56
Income (loss) from operations	(68,227)	(14)	(19,611)	(2)
Interest income	20,666	4	22,152	4
Interest expense	(13,396)	(3)	(12,858)	(3)
Other income (expense), net	(12,789)	(3)	(958)	—
Income (loss) before provision for (benefit from) income taxes	(73,746)	(16)	(11,275)	(1)
Provision for (benefit from) income taxes	(7,773)	(2)	(9,002)	(2)
Net income (loss)	$ (65,973)	(14)%	$ (2,273)	1 %

Revenue

We derive our revenue from licensing our software applications, subscriptions to our cloud services, providing support, and delivering professional services.

License and Subscription

A majority of our license and subscription revenue consists of term license fees. We also recognize revenue from subscription services and sales of perpetual licenses. A substantial majority of our term licenses have been sold under a two-year initial term with optional annual renewals after the initial term. In certain cases, we have entered into term license arrangements with our customers that have an initial term of more than two years or renewed license arrangements for longer than one year. Term license revenue for the initial term of the customer agreement is generally fully recognized upon delivery of the software. Revenue on renewed license arrangements is recognized for the entire committed renewal period at the beginning of the renewal period, which in the case of multi-year renewals is generally more than the revenue recognized on annual auto-renewals. A portion of revenue is generally recognized prior to billings to customers during the initial term and during multi-year renewals of term licenses.

Subscription revenue is recognized ratably over the term of the arrangement, beginning at the point in time our provisioning process has been completed and access has been made available to the customer. The initial term of such arrangements is generally from three to five years, which is generally longer than the initial term of our term license arrangements. Subscription agreements also contain optional annual renewals commencing upon the expiration of the initial contract term.

In a limited number of cases, we license our software on a perpetual basis. Perpetual license revenue is generally recognized upon delivery.

We generally price our software based on the amount of DWP that will be managed by our software. A majority of our term license customers are billed annually in advance, and we currently bill our subscription customers similarly. We invoice our perpetual license customers either in full at contract signing or on an installment basis.

Maintenance

Our maintenance revenue is generally recognized over the committed support term. Our maintenance fees are typically priced as a fixed percentage of the associated license fees. We invoice a majority of our customers annually in advance.

Services

Our services revenue is primarily derived from implementation services performed for our customers, reimbursable travel expenses, and training fees. A substantial majority of our services engagements generate revenue on a time and materials basis and revenue is recognized upon providing our services.

	Three Months Ended April 30,					
	2020		2019		Change	
	Amount	As a % of total revenue	Amount	As a % of total revenue	($)	(%)
	(in thousands, except percentages)					
Revenue:						
License and subscription						
Term license	$ 62,656	37 %	$ 60,252	37 %	$ 2,404	4 %
Subscription	30,078	18	14,691	9	15,387	105 %
Perpetual license	448	—	1,275	1	(827)	(65)%
Maintenance	20,694	12	21,335	13	(641)	(3)%
Services	54,289	32	65,314	40	(11,025)	(17)%
Total revenue	$ 168,165	99 %	$ 162,867	100 %	$ 5,298	3 %

	Nine Months Ended April 30,					
	2020		2019		Change	
	Amount	As a % of total revenue	Amount	As a % of total revenue	($)	(%)
	(in thousands, except percentages)					
Revenue:						
License and subscription						
Term license	$ 191,104	38 %	$ 211,205	42 %	$ (20,101)	(10)%
Subscription	86,916	17	44,779	9	42,137	94 %
Perpetual license	2,539	1	1,627	—	912	56 %
Maintenance	62,781	13	63,602	12	(821)	(1)%
Services	155,293	31	190,443	37	(35,150)	(18)%
Total revenue	$ 498,633	100 %	$ 511,656	100 %	$ (13,023)	(3)%

License and Subscription

While term licenses are currently our predominant licensing model, we anticipate subscriptions will continue to grow as a percentage of annual sales in future periods. Due to the ratable recognition of subscription revenue, growth in subscription revenue will lag behind the growth of subscription orders and will impact the comparative growth of our reported revenue. If we complete a higher percentage of subscription deals in a given period, our short-term growth rates will be negatively impacted.

Term license revenue increased by $2.4 million during the three months ended April 30, 2020, compared to the same period a year ago, primarily due to new multi-year term license deals and multi-year renewal activity of $13.7 million, partially offset by new multi-year term license deals completed in the third quarter of the prior fiscal year, which represented $11.2 million of revenue that did not renew in the current fiscal year because the initial term has not expired.

Term license revenue decreased by $20.1 million during the nine months ended April 30, 2020, compared to the same period a year ago, primarily due to $36.1 million of multi-year term license deals entered into during fiscal year 2019, for which we recognized revenue upfront for the entire initial term. One of those deals was a ten-year term license contract, under which we recognized $14.5 million of term license revenue during the nine months ended April 30, 2019. These decreases were partially offset by renewal activity and new deals executed during the nine months ended April 30, 2020. The current period activity reflects the increase in subscriptions as a percentage of new deals.

Subscription revenue increased by $15.4 million and $42.1 million during the three and nine months ended April 30, 2020, respectively, compared to the same periods a year ago. Increases in the three and nine months ended April 30, 2020 of $12.7 million and $37.4 million, respectively, were related to subscription revenue from orders for our Guidewire InsuranceSuite via Guidewire Cloud that were entered into since the third fiscal quarter of 2019.

Perpetual license revenue accounted for less than 1% of total license and subscription revenue during the three and nine months ended April 30, 2020, respectively. We expect perpetual license revenue to continue to represent a small percentage of our total license and subscription revenue. We also expect perpetual license revenue to potentially be volatile across quarters due to the large amount of perpetual revenue that may be generated from a single customer order.

Maintenance Revenue

Maintenance revenue associated with term and perpetual licenses decreased by $0.6 million and $0.8 million during the three and nine months ended April 30, 2020, respectively, compared to the same periods a year ago. Maintenance related to subscription arrangements is included in subscription revenue, as maintenance is not quoted or priced separately from the subscription services. As a result, we expect the increase in subscription orders as a percentage of new sales and customers transitioning from term licenses to subscription services will continue to reduce the growth in or result in lower maintenance revenue in the future.

Services Revenue

Services revenue decreased $11.0 million and $35.2 million during the three and nine months ended April 30, 2020, respectively, compared to the same periods a year ago. These decreases were primarily driven by the completion of large Guidewire InsuranceSuite implementations in prior periods, increased involvement by SI's in cloud implementations, and investments we are making in certain customer implementations.

We work closely with our network of third-party SI partners to facilitate new sales and implementations of both our self-managed products and subscription services. We believe this model will continue to serve us well, and we intend to continue to expand our network of SI partners and the number of certified consultants with whom we work so we can leverage our SI partners more effectively, especially for future subscription implementations. Certain initial implementations of Guidewire InsuranceSuite via Guidewire Cloud required greater levels of participation by our services professionals due to our obligation to manage the subscription environment which requires greater familiarity with configurations and integrations. However, certain more recent implementations of Guidewire InsuranceSuite via Guidewire Cloud rely on our SI partners to lead the implementation efforts. As the number of implementations led by our SI partners increase, our services revenue could decrease.

For the fourth fiscal quarter of 2020 and potentially longer, we expect challenges related to COVID-19 will negatively impact services revenue. We also expect modestly higher levels of variability in our services revenue. As we continue to expand into new markets and new product categories, we have, and may continue to, enter into contracts with reduced billing rates, make investments in customer engagements, and enter into fixed price contracts, which may take more effort to complete than originally anticipated.

Cost of Revenue and Gross Profit

Our cost of license and subscription revenue primarily consists of personnel costs for our production services and cloud operations employees, cloud infrastructure costs, amortization of our acquired intangible assets, and royalty fees paid to third parties. Our cost of maintenance revenue primarily consists of personnel costs for our technical support team. Our cost of services revenue primarily consists of personnel costs for our professional service employees, third-party contractors, and travel-related costs. In instances where we have primary responsibility for the delivery of services, subcontractor fees are expensed as cost of services revenue. In each case, personnel costs include salaries, bonuses, benefits, and stock-based compensation.

We allocate overhead such as facilities, information technology support, information security, and other administrative costs to all functional departments based on headcount. As such, these overhead expenses are reflected in cost of revenue and each functional operating expense. Overhead expenses have increased primarily due to the costs related to our new headquarters that commenced in December 2019 and additional information security requirements as we transition to the cloud.

Cost of Revenue:

	Three Months Ended April 30,			
	2020	2019	Change	
	Amount	Amount	($)	(%)
	(in thousands, except percentages)			
Cost of revenue:				
License and subscription	$ 28,713	$ 15,781	$ 12,932	82 %
Maintenance	4,375	3,924	451	11
Services	52,664	60,573	(7,909)	(13)
Total cost of revenue	$ 85,752	$ 80,278	$ 5,474	7
Includes stock-based compensation of:				
Cost of license and subscription revenue	$ 1,694	$ 589	$ 1,105	
Cost of maintenance revenue	469	274	195	
Cost of services revenue	4,862	5,721	(859)	
Total	$ 7,025	$ 6,584	$ 441	

	Nine Months Ended April 30,						
	2020		2019		Change		
	Amount		Amount		($)		(%)
	(in thousands, except percentages)						
Cost of revenue:							
License and subscription	$	79,541	$	43,850	$	35,691	81 %
Maintenance		12,153		11,746		407	3
Services		158,510		185,970		(27,460)	(15)
Total cost of revenue	$	250,204	$	241,566	$	8,638	4
Includes stock-based compensation of:							
Cost of license and subscription revenue	$	4,674	$	1,458	$	3,216	
Cost of maintenance revenue		1,376		1,366		10	
Cost of services revenue		15,663		17,899		(2,236)	
Total	$	21,713	$	20,723	$	990	

The $12.9 million increase in cost of license and subscription revenue during the three months ended April 30, 2020, compared to the same period a year ago, was primarily attributable to increases of $8.7 million in personnel costs and $2.7 million in cloud infrastructure costs incurred to support the growth of our subscription and cloud offerings.

The $35.7 million increase in cost of license and subscription revenue during the nine months ended April 30, 2020, compared to the same period a year ago, was primarily attributable to increases of $24.6 million in personnel costs, $7.3 million in cloud infrastructure costs, and $3.7 million in professional services incurred to support our cloud customers and the growth of our subscription and cloud offerings.

We anticipate higher cost of license and subscription revenue as we continue to invest in our cloud operations and add new cloud customers.

Cost of maintenance revenue remained relatively flat during the three and nine months ended April 30, 2020, compared to the same period a year ago.

The $7.9 million and $27.5 million decreases in cost of services revenue during the three and nine months ended April 30, 2020, compared to the same periods a year ago, were attributable to decreases in personnel expenses and third-party consultant costs billable to customers primarily as a result of the completion of certain large Guidewire InsuranceSuite and Guidewire InsuranceNow implementation engagements and, to a lesser extent, lower billable travel expenses resulting from COVID-19 travel restrictions.

We had 761 professional service employees and 335 technical support and licensing operations employees at April 30, 2020 compared to 809 professional services employees and 163 technical support and licensing operations employees at April 30, 2019. The growth in technical support and licensing operations personnel is largely driven by the growing cloud operations team and investments to standardize delivery and support to current and future cloud customers. The decrease in professional services personnel reflects the efforts we have made to train and certify our SI partners to enable their greater involvement in cloud implementations.

Gross Profit:

	Three Months Ended April 30,					
	2020		2019		Change	
	Amount	Margin %	Amount	Margin %	($)	(%)
	(in thousands, except percentages)					
Gross profit:						
License and subscription	$ 64,469	69 %	$ 60,437	79 %	$ 4,032	7 %
Maintenance	16,319	79	17,411	82	(1,092)	(6)
Services	1,625	3	4,741	7	(3,116)	(66)
Total gross profit	$ 82,413	49	$ 82,589	50	$ (176)	—

Our gross profit as a percentage of sales, or gross margin, decreased slightly during the three months ended April 30, 2020, compared to the same period a year ago. The decrease in services gross profit primarily related to investments in certain customer implementations was offset by higher license and subscription gross profit. The higher license and subscription gross profit was a result of higher license and subscription revenue. However, license and subscription gross margin decreased due to our increasing investments required to support our ongoing transition to the cloud.

	Nine Months Ended April 30,					
	2020		2019		Change	
	Amount	Margin %	Amount	Margin %	($)	(%)
	(in thousands, except percentages)					
Gross profit:						
License and subscription	$ 201,018	72 %	$ 213,761	83 %	$ (12,743)	(6)%
Maintenance	50,628	81	51,856	82	(1,228)	(2)
Services	(3,217)	(2)	4,473	2	(7,690)	(172)
Total gross profit	$ 248,429	50	$ 270,090	54	$ (21,661)	(8)

Our gross margin was 50% during the nine months ended April 30, 2020, compared to 54% in the same period a year ago. The decrease in our gross margin was primarily driven by the lower license and subscription gross margins as a result of lower term license revenue and the increasing investments required to support our ongoing transition to the cloud, and, to a lesser extent, lower services gross margins as we make investments in certain customer implementations.

We expect license and subscription gross margins will fluctuate as we continue to invest in our cloud operations, we sign multi-year term licenses or multi-year renewals, our subscription revenue increases, and we experience pricing pressures due to the current economic environment. We expect the increase in subscription orders as a percentage of new sales and customers transitioning from term licenses to subscription services will continue to reduce the growth in or result in lower maintenance profit or gross margin in the future. In addition to the impact of our customer investments, we expect challenges related to COVID-19 will negatively impact services gross margin in the fourth fiscal quarter of 2020 and potentially longer.

Operating Expenses

Our operating expenses consist of research and development, sales and marketing, and general and administrative expenses. The largest components of our operating expenses are personnel costs for our employees and, to a lesser extent, professional services. In each case, personnel costs include salaries, bonuses, commissions, benefits, and stock-based compensation.

We allocate overhead such as facilities, information technology support, information security, and other administrative costs to all functional departments based on headcount. As a result, these overhead expenses are reflected in cost of revenue and each functional operating expense. Overhead expenses primarily have increased due to the costs related to our new headquarters and additional information security requirements as we transition to the cloud.

	Three Months Ended April 30,					
	2020		2019		Change	
	Amount	As a % of total revenue	Amount	As a % of total revenue	($)	(%)
	(in thousands, except percentages)					
Operating expenses:						
Research and development	$ 51,893	30 %	$ 47,102	29 %	$ 4,791	10 %
Sales and marketing	35,235	21	33,301	20	1,934	6
General and administrative	20,885	12	17,953	11	2,932	16
Total operating expenses	$ 108,013	63	$ 98,356	60	$ 9,657	10
Includes stock-based compensation of:						
Research and development	$ 6,500		$ 4,919		$ 1,581	
Sales and marketing	4,990		4,731		259	
General and administrative	6,266		4,816		1,450	
Total	$ 17,756		$ 14,466		$ 3,290	

	Nine Months Ended April 30,					
	2020		2019		Change	
	Amount	As a % of total revenue	Amount	As a % of total revenue	($)	(%)
	(in thousands, except percentages)					
Operating expenses:						
Research and development	$ 148,343	30 %	$ 139,069	27 %	$ 9,274	7 %
Sales and marketing	105,590	21	96,793	19	8,797	9
General and administrative	62,723	13	53,839	10	8,884	17
Total operating expenses	$ 316,656	64	$ 289,701	56	$ 26,955	9
Includes stock-based compensation of:						
Research and development	$ 19,349		$ 17,765		$ 1,584	
Sales and marketing	16,143		14,426		1,717	
General and administrative	18,870		15,843		3,027	
Total	$ 54,362		$ 48,034		$ 6,328	

Research and Development

Our research and development expenses consist primarily of personnel costs for our technical staff and consultants providing design, programming, and testing services.

The $4.8 million increase in research and development expenses during the three months ended April 30, 2020, as compared to the same period a year ago, was primarily due to an increase in costs related to our personnel and new headquarters of $4.0 million and additional cloud infrastructure costs of $0.7 million that support the development of our subscription offerings, information security requirements, and cloud strategy.

The $9.3 million increase in research and development expenses during the nine months ended April 30, 2020, as compared to the same period a year ago, was primarily due to an increase in costs related to our new headquarters of $6.9 million and additional cloud infrastructure costs of $2.3 million that support the development of our subscription offerings, information security requirements, and cloud strategy.

Our research and development headcount was 749 at April 30, 2020 compared with 709 at April 30, 2019.

We expect our research and development expenses to increase in absolute dollars as we continue to invest in the improvement and functionality of our solutions and to migrate our solutions to the cloud. Research and development expenses may also increase if we pursue acquisitions.

Sales and Marketing

Our sales and marketing expenses primarily consist of personnel costs for our sales and marketing employees. It also includes travel expenses, professional services for marketing activities, and amortization of certain acquired intangibles.

The $1.9 million increase in sales and marketing expenses during the three months ended April 30, 2020, compared to the same period a year ago, was primarily attributable to an increase of $3.0 million in personnel costs to sell our products, partially offset by decreases of $0.8 million in marketing and advertising expenses driven by fewer events due to COVID-19 travel restrictions, and $0.5 million in the amortization of acquired intangible assets as they became fully amortized.

The $8.8 million increase in sales and marketing expenses during the nine months ended April 30, 2020, compared to the same period a year ago, was primarily attributable to an increase of $10.2 million in personnel costs to sell our products, partially offset by a $1.2 million decrease in the amortization of acquired intangible assets as they became fully amortized.

Certain commissions are capitalized when earned and amortized over the anticipated period of time that goods and services are expected to be provided to a customer, which we estimate to be approximately five years. Commissions capitalized were $2.6 million and $4.9 million during the three months ended April 30, 2020 and 2019, respectively, and were $5.8 million and $6.1 million during the nine months ended April 30, 2020 and 2019, respectively. Amortization of commissions was $2.2 million and $1.2 million during the three months ended April 30, 2020 and 2019, respectively, and was $5.6 million and $2.3 million during the nine months ended April 30, 2020 and 2019, respectively. The impact of the accounting for commissions is reflected in personnel costs.

Our sales and marketing headcount was 395 at April 30, 2020 compared with 359 at April 30, 2019.

We expect our sales and marketing expenses to increase in absolute dollars as we continue to invest in sales and marketing activities to support our business growth and objectives.

General and Administrative

Our general and administrative expenses include executive, finance, human resources, legal, and corporate development and strategy functions, and primarily consist of personnel costs, as well as professional services.

The $2.9 million increase during the three months ended April 30, 2020, compared to the same period a year ago, was primarily attributable to increases of $1.9 million in personnel costs and $0.8 million in software and facilities expenses to support our growth.

The $8.9 million increase during the nine months ended April 30, 2020, compared to the same period a year ago, was primarily attributable to increases of $6.5 million in personnel costs and $2.1 million in software and facilities expenses to support our growth.

Our general and administrative headcount was 318 at April 30, 2020 compared with 274 at April 30, 2019. General and administrative headcount includes personnel in information technology support, information security, facilities, and recruiting whose expenses are allocated across all functional departments.

We expect that our general and administrative expenses will increase in absolute dollars as we continue to invest in personnel, corporate infrastructure, and systems required to support our strategic initiatives, the growth of our business, and our compliance and reporting obligations.

Other Income (Expense)

	Three Months Ended April 30,			
	2020	2019	Change	
	Amount	Amount	($)	(%)
	(in thousands, except percentages)			
Interest income	$ 6,072	$ 7,748	$ (1,676)	(22)%
Interest expense	(4,505)	(4,327)	(178)	4 %
Other income (expense), net	(12,356)	(617)	(11,739)	1,903 %

	Nine Months Ended April 30,			
	2020	2019	Change	
	Amount	Amount	($)	(%)
	(in thousands, except percentages)			
Interest income	$ 20,666	$ 22,152	$ (1,486)	(7)%
Interest expense	(13,396)	(12,858)	(538)	4 %
Other income (expense), net	(12,789)	(958)	(11,831)	1,235 %

Interest Income

Interest income represents interest earned on our cash, cash equivalents, and investments and interest on revenue arrangements with a significant financing component.

Interest income decreased $1.7 million and $1.5 million during the three and nine months ended April 30, 2020, compared to the same periods a year ago, primarily due to lower yields on invested funds.

Interest Expense

Interest expense consists of both stated interest and the amortization of debt discount and issuance costs associated with the $400.0 million aggregate principal amount of our Convertible Senior Notes that were issued in March 2018. The amortization of debt discount and issuance costs are recognized on an effective interest basis. Stated interest expense is consistent in the comparative periods as the outstanding principal and stated interest rate have not changed.

Interest expense for the three months ended April 30, 2020 and 2019 consists of non-cash interest expense related to the amortization of debt discount and issuance costs of $3.2 million and $3.1 million respectively, and stated interest of $1.3 million in both periods. Interest expense for the nine months ended April 30, 2020 and 2019 consists of non-cash interest expense related to the amortization of debt discount and issuance costs of $9.6 million and $9.1 million, respectively, and stated interest of $3.8 million in both periods.

Other Income (Expense), Net

Other income (expense), net includes foreign exchange gains and losses resulting from fluctuations in foreign exchange rates on monetary asset and monetary liability balances that are denominated in currencies other than the functional currency of the entity in which they are recorded. We currently have entities with a functional currency of the Argentine Peso, Australian Dollar, Brazilian Real, British Pound, Canadian Dollar, Danish Kroner, Euro, Indian Rupee, Japanese Yen, Malaysian Ringgit, New Zealand Dollar, Polish Zloty, Russian Ruble, and Swiss Franc.

Additionally, changes in the fair value of strategic investments are also included in other income (expense), net.

Other expense, net increased by $11.7 million during the three months ended April 30, 2020, as compared to the same period a year ago primarily due to the $10.7 million change in fair value of our strategic investment and, to a lesser extent, the increase in net currency exchange losses.

Other expense, net increased by $11.8 million during the nine months ended April 30, 2020, as compared to the same period a year ago, primarily due to the $10.7 million change in fair value of our strategic investment and, to a lesser extent, the increase in net currency exchange losses.

Provision for (benefit from) Income Taxes

We are subject to taxes in the United States as well as other tax jurisdictions and countries in which we conduct business. Earnings from our non-U.S. activities are subject to local country income tax and may be subject to U.S. income tax.

	Three Months Ended April 30,			
	2020	**2019**	**Change**	
	Amount	**Amount**	**($)**	**(%)**
	(in thousands, except percentages)			
Provision for (benefit from) income taxes	$ (5,351)	$ (4,382)	$ (969)	22 %
Effective tax rate	15 %	34 %		

	Nine Months Ended April 30,			
	2020	**2019**	**Change**	
	Amount	**Amount**	**($)**	**(%)**
	(in thousands, except percentages)			
Provision for (benefit from) income taxes	$ (7,773)	$ (9,002)	$ 1,229	(14)%
Effective tax rate	11 %	80 %		

We recognized an income tax benefit of $5.4 million and $4.4 million for the three months ended April 30, 2020 and 2019, respectively, and an income tax benefit of $7.8 million and $9.0 million for the nine months ended April 30, 2020 and 2019, respectively. The change in the amount of income tax recorded for the three months ended April 30, 2020 compared to the same period a year ago was primarily due to higher losses recognized in the current fiscal quarter. The change in the amount of income tax recorded for the nine months ended April 30, 2020 compared to the same period a year ago was primarily due to the base erosion and anti-abuse tax ("BEAT") liability of $11.3 million recognized during the nine months ended April 30, 2020, of which $5.4 million relates to the current fiscal year and $5.9 million relates to the prior fiscal year, as a result of regulations issued by the Internal Revenue Service ("IRS") on December 2, 2019. The Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was passed on March 27, 2020 and amended a certain provision of the tax law that reduced our BEAT liability by $1.0 million, which was recorded during the three months ended April 30, 2020. The effective tax rate of 15% and 11% for the three and nine months ended April 30, 2020, respectively, differs from the statutory U.S. federal income tax rate of 21% mainly due to permanent differences for stock-based compensation including excess tax benefits, research and development credits, certain non-deductible expenses including executive compensation, and BEAT.

During the three and nine months ended April 30, 2020, unrecognized tax benefits increased by $0.3 million and $1.0 million, respectively. As of April 30, 2020, we had unrecognized tax benefits of $6.9 million that, if recognized, would affect our effective tax rate.

Non-GAAP Financial Measures

In addition to the key business metrics presented above, we believe that the following non-GAAP financial measures provide useful information to management and investors regarding certain financial and business trends relating to our financial condition and results of operations. Management uses these non-GAAP measures to compare our performance to that of prior periods for trend analysis, for purposes of determining executive and senior management incentive compensation, and for budgeting and planning purposes. We believe that the use of these non-GAAP financial measures provides an additional tool for investors to use in evaluating ongoing operating results and trends and in comparing our financial results with other software companies because it provides consistency and comparability with past financial performance and assists in comparisons with other companies, many of which present similar non-GAAP financial measures to investors. However, our management does not consider these non-GAAP measures in isolation or as an alternative to financial measures determined in accordance with GAAP.

The non-GAAP financial information is presented for supplemental informational purposes only, should not be considered a substitute for financial information presented in accordance with GAAP, and may be different from similarly-titled non-GAAP measures used by other companies. The principal limitation of these non-GAAP financial measures is that they exclude significant expenses and income that are required by GAAP to be recorded in our financial statements. In addition, they are subject to inherent limitations as they reflect the exercise of judgment by management about which expenses and income are excluded or included in determining these non-GAAP financial measures. We urge investors to review the reconciliation of non-GAAP financial measures to the comparable GAAP financial measures included herein and not to rely on any single financial measure to evaluate the Company's business.

The following table reconciles the specific items excluded from GAAP in the calculation of non-GAAP financial measures for the periods indicated below.

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2020	2019	2020	2019
Gross profit reconciliation:				
GAAP gross profit	$ 82,413	$ 82,589	$ 248,429	$ 270,090
Non-GAAP adjustments:				
Stock-based compensation	7,025	6,584	21,713	20,723
Amortization of intangibles	4,805	4,945	14,695	14,835
Non-GAAP gross profit	$ 94,243	$ 94,118	$ 284,837	$ 305,648
Income (loss) from operations reconciliation:				
GAAP income (loss) from operations	$ (25,600)	$ (15,767)	$ (68,227)	$ (19,611)
Non-GAAP adjustments:				
Stock-based compensation	24,781	21,050	76,075	68,757
Amortization of intangibles	6,602	7,278	20,511	21,896
Non-GAAP income (loss) from operations	$ 5,783	$ 12,561	$ 28,359	$ 71,042
Net income (loss) reconciliation:				
GAAP net income (loss)	$ (31,038)	$ (8,581)	$ (65,973)	$ (2,273)
Non-GAAP adjustments:				
Stock-based compensation	24,781	21,050	76,075	68,757
Amortization of intangibles	6,602	7,278	20,511	21,896
Amortization of debt discount and issuance costs	3,244	3,070	9,598	9,083
Changes in fair value of strategic investment[3]	10,672	—	10,672	—
Tax impact of non-GAAP adjustments [1]	(6,559)	(7,586)	(14,645)	(23,860)
Non-GAAP net income (loss)	$ 7,702	$ 15,231	$ 36,238	$ 73,603
Tax provision (benefit) reconciliation:				
GAAP tax provision (benefit)	$ (5,351)	$ (4,382)	$ (7,773)	$ (9,002)
Non-GAAP adjustments:				
Stock-based compensation	3,295	3,676	11,824	11,578
Amortization of intangibles	878	1,271	3,197	3,694
Amortization of debt discount and issuance costs	431	536	1,489	1,540
Changes in fair value of strategic investment[3]	1,418	—	1,418	—
Tax impact of non-GAAP adjustments [1]	537	2,103	(3,283)	7,048
Non-GAAP tax provision (benefit)	$ 1,208	$ 3,204	$ 6,872	$ 14,858
Net income (loss) per share reconciliation:				
GAAP net income (loss) per share — diluted	$ (0.37)	$ (0.11)	$ (0.80)	$ (0.03)
Non-GAAP adjustments:				

Stock-based compensation	0.30	0.26	0.92	0.84
Amortization of intangibles	0.08	0.09	0.25	0.27
Amortization of debt discount and issuance costs	0.04	0.04	0.12	0.12
Changes in fair value of strategic investment(3)	0.13	—	0.13	—
Tax impact of non-GAAP adjustments (1)	(0.08)	(0.09)	(0.18)	(0.30)
Non-GAAP dilutive shares excluded from GAAP net income (loss) per share calculation (2)	(0.01)	(0.01)	(0.02)	(0.01)
Non-GAAP net income (loss) per share — diluted	$ 0.09	$ 0.18	$ 0.42	$ 0.89
Shares used in computing Non-GAAP income (loss) per share amounts:				
GAAP weighted average shares — diluted	83,024,291	81,606,088	82,701,267	81,252,993
Non-GAAP dilutive shares excluded from GAAP income (loss) per share calculation (2)	486,398	1,031,086	798,189	1,245,769
Pro forma weighted average shares — diluted	83,510,689	82,637,174	83,499,456	82,498,762

(1) Adjustments reflect the impact on the tax benefit (provision) from all non-GAAP adjustments.
(2) Due to the occurrence of a net loss on a GAAP basis, potentially dilutive securities were excluded from the calculation of GAAP net income (loss) per share, as they would have an anti-dilutive effect. However, these shares have a dilutive effect on non-GAAP net income (loss) per share and, therefore, are included in the non-GAAP net income (loss) per share calculation.
(3) Effective the third fiscal quarter of 2020, changes in fair value of strategic investments are excluded from the non-GAAP measures. Prior to the third fiscal quarter of 2020, there have been no changes in fair value of strategic investments in any periods presented.

Liquidity and Capital Resources

Our principal sources of liquidity are as follows (in thousands):

	April 30, 2020	July 31, 2019
	Amount	Amount
Cash, cash equivalents, and investments	$ 1,325,961	$ 1,337,761
Working capital	$ 1,047,582	$ 1,102,702

Cash, Cash Equivalents, and Investments

Our cash and cash equivalents are comprised of cash and liquid investments with remaining maturities of 90 days or less from the date of purchase, primarily commercial paper and money market funds. Substantially all of our investments are comprised of corporate debt securities, U.S. government and agency debt securities, commercial paper, asset-backed securities, and non-U.S. government securities, which include state, municipal and foreign government securities.

As of April 30, 2020, approximately $34.6 million of our cash and cash equivalents were domiciled in foreign jurisdictions. While we have no current plans to repatriate these funds to the United States, we may repatriate foreign earnings in the future to the extent that the repatriation is not restricted by local laws or there are no substantial incremental costs associated with such repatriation.

Cash Flows

Our cash flows from operations are significantly impacted by timing of invoicing and collections of accounts receivable, annual bonus payments, as well as payments of payroll, commissions, payroll taxes and other taxes. We expect that we will continue to generate positive cash flows from operations on an annual basis, although this may fluctuate significantly on a quarterly basis. In particular, we typically use more cash during the first fiscal quarter ended October 31, as we generally pay cash bonuses to our employees for the prior fiscal year and seasonally higher sales commissions from increased customer orders booked in our fourth fiscal quarter of the prior year.

We believe that our existing cash and cash equivalents and sources of liquidity will be sufficient to fund our operations for at least the next 12 months. Our future capital requirements will depend on many factors, including our rate of revenue growth, the level of our sales and marketing activities required to expand into other markets, and the timing and extent of our spending to support our research and development efforts and cloud operations. We also anticipate the possibility of investing in, or acquiring complementary businesses, applications or technologies, which may require the use of significant cash resources and/or additional financing. In the future, we expect to make additional strategic investments.

The following summary of cash flows for the periods indicated has been derived from our condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q:

	Nine Months Ended April 30,	
	2020	2019
	(in thousands)	
Net cash provided by (used in) operating activities	$ 5,907	$ 13,252
Net cash provided by (used in) investing activities	33,408	(81,957)
Net cash provided by (used in) financing activities	3,077	1,851

Cash Flows from Operating Activities

Net cash provided by operating activities was $5.9 million for the nine months ended April 30, 2020, compared to cash provided by operating activities of $13.3 million during the nine months ended April 30, 2019. This $7.3 million decrease in operating cash provided was primarily attributable to a $38.1 million decrease in net income after excluding the impact of non-cash charges such as deferred taxes, stock-based compensation expense, depreciation and amortization expense, change in fair value of our strategic investment, and other non-cash items, partially offset by a $30.8 million increase in cash provided by working capital activities, which includes a $9.9 million partial early bonus payout during the nine months ended April 30, 2020. This partial early bonus payout was approved by our board of directors in order to support our employees and, in turn, their local economies during the extraordinary situation created by the COVID-19 pandemic.

Cash Flows from Investing Activities

Net cash provided by investing activities was $33.4 million for the nine months ended April 30, 2020 compared to net cash used in investing activities of $82.0 million for the nine months ended April 30, 2019. The $115.4 million improvement was primarily due to a $106.6 million increase in net cash from available-for-sale securities transactions and a $8.8 million decrease in capital expenditures primarily due to the completion of our new headquarters in San Mateo, California.

Cash Flows from Financing Activities

Net cash provided by financing activities for the nine months ended April 30, 2020 increased by $1.2 million, as compared to the nine months ended April 30, 2019, primarily because of higher proceeds from option exercises.

Commitments and Contractual Obligations

Our primary contractual obligations consist of our Convertible Senior Notes due in 2025, obligations under leases for our office facilities, and letters of credit we have issued to vendors to guarantee our performance under those arrangements.

See Notes 6, 7 and 8 to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for discussions of our Convertible Senior Notes, lease commitments, and letters of credit. There has been no material change in our contractual obligations and commitments other than in the ordinary course of business since our fiscal year ended July 31, 2019, except for the new office facilities leases in Dublin, Ireland and Mississauga, Canada that we signed in early March 2020. We have not taken control of these new office facilities as of April 30, 2020. See the Annual Report on Form 10-K for the fiscal year ended July 31, 2019 for additional information regarding the Company’s contractual obligations.

Off-Balance Sheet Arrangements

Through April 30, 2020, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

ITEM 3. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in interest rates and foreign currency exchange rates. We do not hold or issue financial instruments for trading purposes.

Interest Rate Sensitivity

Our exposure to market risk for changes in interest rates relates primarily to our cash, cash equivalents, and investments as of April 30, 2020 and July 31, 2019. Our cash, cash equivalents, and investments as of April 30, 2020 and July 31, 2019 were $1,326.0 million and $1,337.8 million, respectively, primarily consisting of cash, money market funds, corporate debt securities, U.S. government and agency securities, commercial paper, asset-backed securities, and non-U.S. government securities, which include state, municipal, and foreign government securities. Changes in U.S. interest rates affect the interest earned on our cash, cash equivalents, and marketable securities, and the market value of those securities. A hypothetical 100 basis point increase in interest rates would have resulted in a decrease of $5.2 million and $6.2 million in the market value of our available-for-sale securities as of April 30, 2020 and July 31, 2019, respectively. Any realized gains or losses resulting from such interest rate changes would only occur if we sold the investments prior to maturity.

Foreign Currency Exchange Risk

Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the Argentine Peso, Australian Dollar, Brazilian Real, British Pound, Canadian Dollar, Danish Kroner, Euro, Indian Rupee, Japanese Yen, Malaysian Ringgit, New Zealand Dollar, Polish Zloty, Russian Ruble, and Swiss Franc, the currency of the locations within which we currently operate. The volatility of exchange rates depends on many factors that we cannot forecast with reliable accuracy. We believe our operating activities act as a natural hedge for a substantial portion of our foreign currency exposure because we typically collect revenue and incur costs in the currency of the location in which we provide our services. However, our relationships with our customers are long-term in nature so it is difficult to predict if our operating activities will provide a natural hedge in the future. Additionally, changes in foreign currency exchange rates can affect our financial results due to transaction gains or losses related to revaluing certain monetary asset and monetary liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. For the nine months ended April 30, 2020 and 2019, we recorded foreign currency losses of $2.1 million and $1.0 million, respectively, in other income (expense) in our condensed consolidated statement of operations primarily due to currency exchange rate fluctuations. We will continue to experience fluctuations in foreign currency exchange rates. If a hypothetical ten percent change in foreign exchange rates were to occur in the future, the resulting transaction gain or loss would be approximately $1.7 million. As our international operations grow, we will continue to assess our approach to managing our risk relating to fluctuations in currency rates.

Fair Value of Financial Instruments

We do not have material exposure to market risk with respect to investments in financial instruments, as our investments primarily consist of highly liquid investments purchased with a remaining maturity of three years or less. We do not use derivative financial instruments for speculative or trading purposes. However, this current position does not preclude our adoption of specific hedging strategies in the future.

Strategic Investments

Our strategic investments include privately held companies that are considered to be in the start-up or development stages and are inherently risky. The technologies or products these companies have under development are typically in the early stages and may never materialize, which could result in a loss of a substantial part or all of our initial investment in these companies. We account for these investments at cost minus impairment, if any, plus or minus changes resulting from observable changes in fair value based on orderly transactions for the identical or a similar security of the same issuer. The evaluation is based on information provided by these companies, which is not subject to the same disclosure regulations as U.S. publicly traded companies and, as such, the basis for these evaluations is subject to the timing and accuracy of the data provided. We recognized a change in fair value of our strategic investment of $10.7 million as of April 30, 2020 primarily due to liquidity constraints in the current economic environment.

ITEM 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")), as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on such evaluation, our principal executive officer and principal financial officer have concluded that, as of such date, our disclosure controls and procedures were effective.

Inherent Limitations of Internal Controls

Our management, including our principal executive officer and principal financial officer, does not expect that our disclosure controls and procedures or our internal controls will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended April 30, 2020 identified in management's evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

ITEM 1. Legal Proceedings

From time to time we are involved in legal proceedings that arise in the ordinary course of our business. Any such proceedings, whether meritorious or not, could be time consuming, costly, and result in the diversion of significant operational resources and/or management time.

Although the outcomes of legal proceedings are inherently difficult to predict, we are not currently involved in any legal proceeding in which the outcome, in our judgment based on information currently available, is likely to have a material adverse effect on our business or financial position.

ITEM 1A. Risk Factors

A description of the risks and uncertainties associated with our business is set forth below. You should carefully consider such risks and uncertainties, together with the other information contained in this report, and in our other public filings. If any of such risks and uncertainties actually occurs, our business, financial condition or results of operations could differ materially from the plans, projections and other forward-looking statements included in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this report and in our other public filings. In addition, if any of the following risks and uncertainties, or if any other risks and uncertainties, actually occurs, our business, financial condition or results of operations could be harmed substantially, which could cause the market price of our stock to decline, perhaps significantly.

Risks Related to our Business

The recent global COVID-19 outbreak could harm our business, results of operations, and financial condition.

In March 2020, the World Health Organization declared COVID-19 a global pandemic. This contagious disease outbreak, which has continued to spread, and the related adverse public health developments, including orders to shelter-in-place, have adversely affected workforces, organizations, economies, and financial markets globally, leading to an economic downturn and increased market volatility. It has also disrupted the normal operations of many businesses, including our business, our customers' businesses, and our SI partners' businesses. This outbreak, as well as intensified measures undertaken to contain the spread of COVID-19 could affect the ability to travel to customers and prospects, resulting in delays in services delivery, delays in implementations, and interruptions in sales and marketing activity, including Connections, our annual user conference, and harm our business, results of operations, and financial condition. The related impact on the global economy could also decrease technology spending and adversely affect demand for our products. Further, our sales and implementation cycles could increase, resulting in providing contract terms more favorable to customers and a potentially longer delay between incurring operating expenses and the generation of corresponding revenue, if any, or in difficulty accurately predicting our financial forecasts. Additionally, our customers may be unable to pay or request amended payment terms for their outstanding invoices due to the economic impacts from COVID-19. As a result these containment measures and related economic impact to our business, we may be required to record impairment related to our operating lease assets, investments, long-lived assets, or goodwill. The outbreak also presents operational challenges as our entire workforce is currently working remotely and shifting to assisting customers who are also generally working remotely. It is not possible for us to predict the duration or magnitude of the adverse results of the outbreak and its effects on our business, results of operations, or financial condition at this time. Further, to the extent the COVID-19 pandemic adversely affects our business, results of operations, or financial condition, it may also have the effect of heightening many of the other risks described in this "Risk Factors" section.

We may experience significant quarterly and annual fluctuations in our results of operations due to a number of factors.

Our quarterly and annual results of operations may fluctuate significantly due to a variety of factors, many of which are outside of our control. This variability may lead to volatility in our stock price as investors and research analysts respond to quarterly fluctuations. In addition, comparing our results of operations on a period-to-period basis, particularly on a sequential quarterly basis, may not be meaningful. You should not rely on our past results as an indication of our future performance.
Factors that may affect our results of operations include:

- the impact of market volatility and economic downturns caused by the COVID-19 pandemic on our business and the businesses of our customers and partners;
- our ability to attract new domestic and international customers and renew existing customers;
- seasonal buying patterns of our customers and our ability to sell additional software and services to existing customers;
- the proportion and timing of subscription sales as opposed to term or perpetual software licenses, and the variations in revenue recognition between these contract types;
- changes in contract durations of term software licenses and renewals;

- increases in costs related to cloud operations, product development, and services;
- our ability to develop and achieve market adoption of cloud-based services, including the impact of customers transitioning from term software licenses to subscription services;
- erosion in services margins or significant fluctuations in services revenue caused by changing customer demand, negotiated professional services billing rates, or fixed fee contracts;
- the structure of our licensing contracts, including acceptance terms and escalating payments over multi-year periods;
- our ability to enter into contracts on favorable terms, including terms related to price, payment timing, service levels, and product delivery, especially with customers and prospects that possess substantial negotiating leverage and procurement expertise;
- the incurrence of penalties for failing to meet certain contractual obligations, including service levels and implementation times;
- future accounting pronouncements or changes in accounting rules and our related accounting policies and interpretations;
- our ability to realize expected benefits from our acquisitions;
- reductions in our customers’ budgets for information technology purchases and delays in their purchasing cycles;
- the timing of hiring personnel and employee related expenses;
- the impact of a recession or any other adverse global economic conditions on our business, including pandemics, trade tariffs, trade agreements, and other uncertainties that may cause a delay in entering into or a failure to enter into significant customer agreements or the fulfillment of professional service arrangements;
- fluctuations in foreign currency exchange rates; and
- the effects of inflation or deflation in the economies in which we operate and its impact on our revenues given the multi-year term of certain customer agreements.

The foregoing factors are difficult to forecast, and these, as well as other factors, could materially adversely affect our quarterly and annual results of operations. Further, due to multi-year term licenses and multi-year renewals, increased cloud-based subscription services, and other ongoing changes to our business, it is challenging to forecast our quarterly and annual results.

We believe our ability to adjust spending quickly enough to compensate for a potential revenue shortfall is very limited and our inability to do so could magnify the adverse impact of a potential revenue shortfall on our results of operations. If we fail to achieve our quarterly forecasts, if our forecasts fall below the expectations of investors or research analysts, or if our actual results fail to meet the expectations of investors or research analysts, our stock price may decline.

Seasonal sales patterns may cause significant fluctuations in our results of operations and cash flows and may prevent us from achieving our quarterly or annual forecasts, which may cause our stock price to decline.

We have historically signed a higher percentage of software license orders in the fourth quarter of each fiscal year. We generally see increased new orders in our fourth fiscal quarter, which is the quarter ended July 31st, due to efforts by our sales team to achieve annual incentives. As a result, a significantly higher percentage of our annual license revenue has historically been recognized in our fourth fiscal quarter. Since a substantial majority of our license revenue has annual renewals after the initial term of the contract, we expect to continue to experience this seasonality effect in subsequent years. To a lesser extent, we also see increased new orders in our second fiscal quarter, which is the quarter ended January 31st, due to customer buying patterns. Generally, accounting under ASC 606 for revenue recognition has and may continue to heighten or change the seasonal impact on our new term licenses and multi-year term license renewals due to license revenue for the the entire committed term being recognized at the beginning of the agreement.

We currently anticipate that sales of, and revenue from, subscription services will continue to increase in the future. Subscriptions are recognized ratably over the term of the agreement after provisioning of the service, which may take up to 90 days from the date of the agreement. Over time, this may reduce the impact of our historic seasonality, but in the near term the introduction of proportionally more subscription services into our revenue stream, together with their delayed and ratable recognition, will likely impact quarter over quarter and year-over-year revenue growth comparisons and cash flow because of the ramped nature of the annual installments of these multi-year arrangements.

Our quarterly growth in license revenue also may not coincide with new orders or cash flows in a given quarter, which could mask the impact of seasonal variations. This mismatch is primarily due to the following reasons:

- revenue recognition may not occur in the period when the order is placed due to certain revenue recognition criteria not being met;

- we may enter into license agreements with future product delivery requirements, specified terms for product upgrades or functionality, acceptance terms, or unconditional return rights, which may require us to delay revenue recognition for the initial period;
- our subscription arrangements are recognized ratably and only a portion of the revenue from an order is recognized in the same fiscal period of the order;
- subscription arrangements generally have ramped invoicing schedules over the initial term but revenue is recognized ratably over the initial term; and
- our term license agreements and multi-year term license renewals generally have annual billing arrangements even though revenue is recognized upfront for the entire committed term.

Additionally, seasonal patterns may be affected by the timing of particularly large transactions and the large number of renewals that occur in the first fiscal quarter. For example, in the first quarter of fiscal year 2019, we achieved higher revenue growth due to the delivery of a single license agreement with a term of ten years and resulted in the first quarter of fiscal year 2020 lacking comparability to the prior year period.

Seasonal and other variations related to our revenue recognition may cause significant fluctuations in our results of operations and cash flows, may make it challenging for an investor to predict our performance on a quarterly basis and may prevent us from achieving our quarterly or annual forecasts or meeting or exceeding the expectations of research analysts or investors, which in turn may cause our stock price to decline.

We have relied and expect to continue to rely on orders from a relatively small number of customers in the P&C insurance industry for a substantial portion of our revenue, and the loss of any of these customers would significantly harm our business, results of operations, and financial condition.

Our revenue is dependent on orders from customers in the P&C insurance industry, which may be adversely affected by worldwide economic, environmental, public health, and political conditions. A relatively small number of customers have historically accounted for a significant portion of our revenue. While the composition of our individual top customers will vary from year to year, in fiscal years 2019, 2018, and 2017, our ten largest customers accounted for 31%, 31%, and 26% of our revenue, respectively. Customers for this metric are measured at the parent corporation level, while our total customer count is measured at the purchasing entity level. While we expect this reliance to decrease over time as our revenue and customer base grows, we expect that we will continue to depend upon a relatively small number of customers for a significant portion of our revenue for the foreseeable future. As a result, if we fail to successfully sell our products and services to one or more of these anticipated customers in any particular period or fail to identify additional potential customers or such customers purchase fewer of our products or services, defer or cancel orders, fail to renew their license or subscription agreements or otherwise terminate their relationship with us, our business, results of operations, and financial condition would be harmed. Additionally, if our sales to one or more of these anticipated customers in any particular period are ratable in nature, or if we fail to achieve the required performance or acceptance criteria for one or more of these relatively small number of customers, our quarterly and annual results of operations may fluctuate significantly.

If we fail to successfully manage our transition to a business model focused on delivering cloud-based offerings on a subscription basis or fail to meet stipulated service levels with our subscription services, our results of operations could be harmed.

To address demand trends in the P&C insurance industry, we now offer customers the use of our software products through a cloud-based offering sold on a subscription basis in addition to our self-managed offering. This adjustment to our business model requires a considerable investment of technical, operational, financial, legal, and sales resources. Our software and cloud services involve the storage and transmission of customer data, including in some cases, personal data, and security breaches could result in the loss of this information, which in turn could result in litigation, breach of contract claims, indemnity obligations, harm to our reputation, and other liabilities for us. Our transition to cloud offerings will continue to be the focus of existing resources, require us to hire additional resources, and increase costs, especially in cost of license and subscription revenue and research and development, in any given period. We may not be able to efficiently scale such investments to meet customer demand and expectations, which may impact our long-term growth and results of operations. Further, the increase in some costs associated with our cloud services, such as the cost of public infrastructure, may be difficult to predict over time, especially in light of our limited experience with the costs of delivering cloud-based versions of our applications. Furthermore, we may assume greater responsibilities for implementation related services related to subscription services due to our operating and maintaining the cloud environment for our customers. As a result, we may face risks associated with new and complex implementations, the cost of which may differ from original estimates. Our subscription contracts also contain penalty clauses, for matters such as failing to meet stipulated service levels or other contractual provisions, which represent new risks we are not accustomed to managing. Should these penalties be triggered, our results of operations may be adversely affected. These penalties and costs could take the form of monetary credits for current or future service engagements, reduced fees for additional product sales, and a customer's refusal to pay its contractually-obligated subscription or service fees.

Revenue under our cloud-based subscription model will generally be recognized ratably over the term of the contract. The transition to ratable revenue recognition will result in lower revenue we otherwise would have recognized in the initial period of the customer agreement than under term license agreements. This effect on recognized revenue may be magnified in any fiscal year due to the concentration of our orders in the fourth fiscal quarter. A combination of increased costs and delayed recognition of revenue would adversely impact our gross and operating margins compared to prior periods. Additionally, the change in our business model and transition of our customers from self-managed licenses to cloud-based subscription services could negatively affect our ability to forecast the timing and amount of our revenues in any period.

In addition, market acceptance of our cloud-based offerings may be affected by a variety of factors, including, but not limited to, price, security, reliability, performance, customer preference, public concerns regarding privacy, and the enactment of restrictive laws or regulations. We are in the early stages of re-architecting our existing products and developing new products in an effort to offer customers greater choices on how they utilize our software. As our business practices in this area develop and evolve over time, we may be required to revise our current subscription agreements, which may result in revised terms and conditions that impact how we recognize revenue and the costs and risks associated with these offerings. Whether our product development efforts or business model transition will prove successful and accomplish our business objectives is subject to numerous uncertainties and risks, including, but not limited to, customer demand, our ability to further develop, manage, and scale infrastructure, our ability to include functionality and usability in such offerings that address customer requirements, tax and accounting implications, and our costs.

In addition, the metrics we and our investors use to gauge the status of our business model transition may evolve over the course of the transition as significant trends emerge. It may be difficult, therefore, to accurately determine the impact of this transition on our business on a contemporaneous basis, or to clearly communicate the appropriate metrics to our investors. If we are unable to successfully establish these new cloud offerings and navigate our business model transition in light of the foregoing risks and uncertainties, our reputation could suffer and our results of operations could be harmed, which may cause our stock price to decline.

Increases in services revenue as a percentage of total revenue or lower services margins could adversely affect our overall gross margins and profitability.

Our services revenue was 35%, 41%, and 34% of total revenue for fiscal years 2019, 2018, and 2017, respectively. Our services revenue produces lower gross margins than our license and subscription revenue. The gross margin of our services revenue was 2%, 7%, and 7% for fiscal years 2019, 2018, and 2017, respectively, while the gross margin for license and subscription revenue was 83%, 89%, and 94% for fiscal years 2019, 2018, and 2017, respectively. An increase in the percentage of total revenue represented by services revenue, like we experienced in fiscal year 2018 due to acquisitions and the recognition of revenue on certain cloud-based implementations that were completed in prior years, or lower services margins could reduce our overall gross margins and operating margins. Such a trend can be the result of several factors, some of which may be beyond our control, including change in customer demand for our service team involvement in implementation of new products and services, the rates we charge for our services, our ability to bill our customers for all time incurred to complete a project, and the extent to which SI partners are willing and able to provide services, including leading subscription services implementations, directly to customers. Erosion in our services margins would also adversely affect our gross and operating margins. Services margins may erode for a period of time as we work to grow our business and overall revenue; for instance, services margins may erode if we hire and train additional services personnel to support new products including cloud-based services, if we require additional service personnel to support entry into new markets, we enter into fixed fee services arrangements, our services personnel are under utilized, or if we require additional personnel on unexpectedly difficult projects to ensure customer success, perhaps without commensurate compensation.

If our products or cloud-based services experience data security breaches, and there is unauthorized access to our customers' data, we may lose current or future customers and our reputation and business may be harmed.

If our security measures are breached or unauthorized access to customer data is otherwise obtained, our cloud services may be perceived as not being secure, customers may reduce the use of or stop using our services, and we may incur significant liabilities. Our software and cloud services involve the storage and transmission of customer data, including in some cases, personal data, and security breaches could result in the loss of this information, which in turn could result in litigation, breach of contract claims, indemnity obligations, and other liabilities for our company. While we have taken steps to protect the confidential information and customer data to which we have access, including confidential information we may obtain through our customer support services or customer usage of our cloud-based services, our security measures could be breached. We rely on third-party technology and systems for a variety of services, including, without limitation, encryption and authentication technology, employee email, content delivery to customers, back-office support, and other functions, and our ability to control or prevent breaches of any of these systems may be beyond our control. Because techniques used to obtain unauthorized access or sabotage systems change frequently and generally are not identified until they are launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. Although we have developed systems and processes that are designed to protect customer data and prevent data loss and other security breaches, including systems and processes designed to reduce the impact of a security breach at a third-party vendor, such measures cannot provide absolute security. Any or all of these issues could negatively impact our ability to attract new customers or to increase engagement by existing customers, could cause existing customers to elect not to renew their term licenses or subscription agreements, or could subject us to third-party lawsuits, regulatory fines or other action or liability, thereby adversely affecting our results of operations.

We face intense competition in our market, which could negatively impact our business, results of operations, and financial condition and cause our market share to decline.

The market for our software and services is intensely competitive. The competitors we face in any sale opportunity may change depending on, among other things, the line of business purchasing the software, the application being sold, the geography in which we are operating, and the size of the insurance carrier to which we are selling. For example, we are more likely to face competition from small independent firms when addressing the needs of small insurers. These competitors may compete on the basis of price, the time and cost required for software implementation, custom development, or unique product features or functions. Outside of the United States, we are more likely to compete against vendors that may differentiate themselves based on local advantages in language, market knowledge, and pre-built content applicable to that jurisdiction. We also compete with vendors of horizontal software products that may be customized to address needs of the P&C insurance industry.

Additionally, many of our prospective customers operate firmly entrenched legacy systems, some of which have been in operation for decades. Our implementation cycles may be lengthy, variable, and require the investment of significant time and expense by our customers. These expenses and associated operating risks attendant on any significant process of re-engineering and technology implementation, may cause customers to prefer maintaining legacy systems. Also, maintaining these legacy systems may be so time consuming and costly for our customers that they do not have adequate resources to devote to the purchase and implementation of our products. We also compete against technology consulting firms that either helped create such legacy systems or may own, in full or in part, subsidiaries that develop software and systems for the P&C insurance industry.

As we expand our product portfolio, we may begin to compete with software and service providers we have not competed against previously. Such potential competitors offer data and analytics tools that may, in time, become more competitive with our offerings.

We expect the intensity of competition to remain high in the future, as the amount of capital invested in current and potential competitors has increased significantly in recent years, and this may lead to improved product or sales capabilities, which in turn could lead to new or expanded partnerships with systems integrators. Continuing intense competition could result in increased pricing pressure, increased sales and marketing expenses, and greater investments in research and development, each of which could negatively impact our profitability. In addition, the failure to increase, or the loss of, market share would harm our business, results of operations, financial condition, and/or future prospects. Our larger current and potential competitors may be able to devote greater resources to the development, promotion, and sale of their products than we can devote to ours, which could allow them to respond more quickly than we can to new technologies and changes in customer needs, thus leading to their wider market acceptance. We may not be able to compete effectively and competitive pressures may prevent us from acquiring and maintaining the customer base necessary for us to increase our revenue and profitability.

In addition, our industry is evolving rapidly and we anticipate the market for cloud-based solutions will become increasingly competitive. If our current and potential customers move a greater proportion of their data and computational needs to the cloud, new competitors may emerge that offer services either comparable or better suited than ours to address the demand for such cloud-based solutions, which could reduce demand for our offerings. To compete effectively we will likely be required to increase our investment in research and development, as well as the personnel and third-party services required to improve reliability and lower the cost of delivery of our cloud-based solutions. This may increase our costs more than we anticipate and may adversely impact our results of operations.

Our current and potential competitors may also establish cooperative relationships among themselves or with third parties to further enhance their resources and offerings. Current or potential competitors may be acquired by other vendors or third parties with greater available resources. As a result of such acquisitions, our current or potential competitors might be more able than we are to adapt quickly to new technologies and customer needs, to devote greater resources to the promotion or sale of their products and services, to initiate or withstand substantial price competition, or to take advantage of emerging opportunities by developing and expanding their product and service offerings more quickly than we can. Additionally, they may hold larger portfolios of patents and other intellectual property rights as a result of such relationships or acquisitions. If we are unable to compete effectively with these evolving competitors for market share, our business, results of operations, and financial condition could be materially and adversely affected.

Assertions by third parties of infringement or other violation by us of their intellectual property rights could result in significant costs and substantially harm our business and results of operations.

The software industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patents and other intellectual property rights. In particular, leading companies in the software industry own large numbers of patents, copyrights, trademarks, and trade secrets, which they may use to assert claims against us. From time to time, third parties holding such intellectual property rights, including leading companies, competitors, patent holding companies, and/or non-practicing entities, may assert patent, copyright, trademark, or other intellectual property claims against us, our customers and partners, and those from whom we license technology and intellectual property.

Although we believe that our products and services do not infringe upon the intellectual property rights of third parties, we cannot assure that third parties will not assert infringement or misappropriation claims against us with respect to current or future products or services, or that any such assertions will not require us to enter into royalty arrangements, result in costly litigation, or result in us being unable to use certain intellectual property. We cannot assure that we are not infringing or otherwise violating any third-party intellectual property rights. Infringement assertions from third parties may involve patent holding companies or other patent owners who have no relevant product revenue, and therefore our own issued and pending patents may provide little or no deterrence to these patent owners in bringing intellectual property rights claims against us.

If we are forced to defend against any infringement or misappropriation claims, whether they are with or without merit, are settled out of court or are determined in our favor, we may be required to expend significant time and financial resources on the defense of such claims. Furthermore, an adverse outcome of a dispute may require us to pay damages, potentially including treble damages and attorneys’ fees, if we are found to have willfully infringed a party’s intellectual property; cease making, licensing, or using our products or services that are alleged to infringe or misappropriate the intellectual property of others; expend additional development resources to redesign our products or services; enter into potentially unfavorable royalty or license agreements in order to obtain the right to use necessary technologies or works; and to indemnify our partners, customers, and other third parties. Any of these events could seriously harm our business, results of operations, and financial condition.

We may expand through acquisitions or partnerships with other companies, which may divert our management’s attention and result in unexpected operating and technology integration difficulties, increased costs, and dilution to our stockholders.

Our business strategy includes the potential acquisition of shares or assets of companies with software, technologies, or businesses complementary to ours. Our strategy also includes alliances with such companies. For example, in March 2016, we acquired EagleEye Analytics Inc., a provider of cloud-based predictive analytics products designed for P&C insurers; in August 2016, we acquired FirstBest Systems, Inc., a provider of an underwriting management system for P&C insurers; in February 2017, we acquired ISCS, Inc., a provider of a cloud-based, all-in-one platform that offers policy, billing, and claims management functionality for P&C insurers; and in November 2017, we acquired Cyence, a Software-as-a-Service company that applies data science and risk analytics to enable P&C insurers to underwrite “21st century risks” such as terrorism, cybersecurity, and reputational risk. Each of these acquisitions was initially dilutive to earnings. Acquisitions and alliances may result in unforeseen operating difficulties and expenditures and may not result in the benefits anticipated by such corporate activity. In particular, we may fail to assimilate or integrate the businesses, technologies, services, products, personnel, or operations of the acquired companies, retain key personnel necessary to favorably execute the combined companies’ business plan, or retain existing customers or sell acquired products to new customers. Acquisitions and alliances may also disrupt our ongoing business, divert our resources and require significant management attention that would otherwise be available for ongoing development of our current business. In addition, we may be required to make additional capital investments or undertake remediation efforts to ensure the success of our acquisitions, which may reduce the benefits of such acquisitions. We also may be required to use a substantial amount of our cash or issue debt or equity securities to complete an acquisition or realize the potential of an alliance, which could deplete our cash reserves and/or dilute our existing stockholders. Following an acquisition or the establishment of an alliance offering new products, the timing of revenue from the sale of products that we acquired or that result from the alliance, or from the sale of a bundle of products that includes such new products, may be different than the timing of revenue from existing products. In addition, our ability to maintain favorable pricing of new products may be challenging if we bundle such products with sales of existing products. A delay in the recognition of revenue from sales of acquired or alliance products, or reduced pricing due to bundled sales, may cause fluctuations in our quarterly financial results, may adversely affect our operating margins, and may reduce the benefits of such acquisitions or alliances.

Additionally, competition within the software industry for acquisitions of businesses, technologies, and assets has been, and may continue to be, intense. As such, even if we are able to identify an acquisition that we would like to pursue, the target may be acquired by another strategic buyer or financial buyer such as a private equity firm, or we may otherwise not be able to complete the acquisition on commercially reasonable terms, if at all. Moreover, in addition to our failure to realize the anticipated benefits of any acquisition, including our revenue or return on investment assumptions, we may be exposed to unknown liabilities or impairment charges to acquired intangible assets and goodwill as a result of acquisitions we do complete.

Changes to financial accounting standards may affect our results of operations and could cause us to change our business practices. The nature of our business requires the application of accounting guidance that requires management to make estimates and assumptions. Additionally, changes in accounting guidance may cause us to experience greater volatility in our quarterly and annual results. If we are unsuccessful in adapting to the requirements of new guidance, or in clearly explaining to stockholders how new guidance affects reporting of our results of operations, our stock price may decline.

We prepare our consolidated financial statements to conform to GAAP. These accounting principles are subject to interpretation by the SEC, FASB, and various bodies formed to interpret and create accounting rules and regulations. New accounting standards, such ASC 606 - Revenue from Contracts with Customers adopted in fiscal year 2019 or ASC 842 - Leases adopted in fiscal year 2020, or the guidance relating to interpretation and adoption of standards could have a significant effect on our financial results and could affect our business. Additionally, the FASB and the SEC are focused on the integrity of financial reporting, and accounting policies are subject to scrutiny by regulators and the public.

We cannot predict the impact of future changes to accounting principles or our accounting policies on our financial statements going forward. For example, the Emerging Issues Task Force of the FASB is considering changes that may impact the revenue guidance for the migration from term licenses to subscription services. In addition, were we to change our critical accounting estimates, including those related to the timing of revenue recognition and those used to allocate revenue between various performance obligations, our reported revenue and results of operations could be significantly impacted. For example, the adoption of ASC 606 introduced may risks including the following:

- investors' misunderstanding of our business and underlying trends and what they could mean for the underlying success of our business;
- misinterpretation of historic and future trends; and
- mistakes by us in explaining our historical results or new known trends.

In order to reduce the risk of financial statement volatility, we revised our contracting practices primarily by shortening the initial non-refundable term of our licenses. If we are unsuccessful in adapting to the requirements of the new revenue standard, or if changes to our go-to-market strategy create new risks, then we may experience greater volatility in our quarterly and annual results, which may cause our stock price to decline.

In addition, GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, 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. Further, under ASC 606, more judgment and estimates are required within the revenue recognition process than was required under previous GAAP. Despite no change in associated cash flows, we currently anticipate that this standard could create additional volatility in our reported revenue and results of operations, which may cause our stock price to decline.

The restatement of our financial statements may lead to additional risks and uncertainties, including regulatory, stockholder or other actions, loss of investor and counterparty confidence and negative impacts on our stock price.

Our audit committee, after consultation with management and discussion with our independent registered public accounting firm, concluded that our previously issued consolidated financial statements for the fiscal years ended July 31, 2018 and 2017 should be restated for the reasons described in the "Explanatory Note" preceding Part I, Item 1 and "Note 1 — The Company and Summary of Significant Accounting Policies — Restatement of Annual Consolidated Financial Statements" of the Consolidated Financial Statements under Item 8 of Part II of our 2018 Form 10-K/A for the fiscal year ended July 31, 2018, filed on June 3, 2019.

As a result of the restatement and associated non-reliance on our previously issued consolidated financial statements for the fiscal years ended July 31, 2018 and 2017, we incurred a number of additional costs and are subject to additional risks, including unanticipated costs for accounting and legal fees in connection with or related to the restatement. In addition, the attention of our management team was diverted by these efforts. We could also be subject to regulatory, stockholder, or other actions in connection with the restatement, which would, regardless of the outcome, consume management's time and attention and may result in additional legal, accounting, and other costs. If we do not prevail in any such proceedings, we could be required to pay damages or settlement costs. In addition, the restatement and related matters could impair our reputation or could cause our customers, stockholders, or other counterparties to lose confidence in us. Any of these occurrences could have a material adverse effect on our business, results of operations, financial condition, and stock price.

If we fail to maintain effective internal control over financial reporting in the future or identify a material weakness in our internal control over financial reporting, our ability to report our financial condition and results of operations in a timely and accurate manner could be adversely affected, investor confidence in our company could diminish, and the value of our common stock may decline.

Preparing our consolidated financial statements involves a number of complex manual and automated processes, which are dependent upon individual data input or review and require significant management judgment. One or more of these processes may result in errors that may not be detected and could result in a material misstatement of our consolidated financial statements. The Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act") requires, among other things, that as a publicly-traded company we disclose whether our internal control over financial reporting and disclosure controls and procedures are effective.

In connection with the restatement of our financial results for the fiscal years ended July 31, 2018 and 2017, management identified a material weakness in our internal control over financial reporting related to the ineffective design and operation of certain process level internal controls over the existence and accuracy of revenue transactions as of July 31, 2018. The deficiency arose because we did not conduct an effective assessment to identify risks of material misstatement related to the existence and accuracy of revenue transactions related to certain customer contracts that were amended to extend the initial license term by one year. In response, we implemented changes to our processes and controls during fiscal year 2019, which we believe have remediated this material weakness, as further described in Item 9A — "Controls and Procedures" of Part II of our Annual Report on Form 10-K for the fiscal year ended July 31, 2019.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

While we continually undertake steps to improve our internal control over financial reporting, we may not be successful in making the improvements necessary to be able to identify and remediate additional control deficiencies or material weaknesses in the future. If we are unable to successfully remediate any future material weaknesses in our internal control over financial reporting, the accuracy and timing of our financial reporting may be adversely affected; our liquidity, access to capital markets and perceptions of our creditworthiness may be adversely affected; we may be unable to maintain compliance with securities laws, stock exchange listing requirements and debt instruments covenants regarding the timely filing of periodic reports; we may be subject to regulatory investigations and penalties; investors may lose confidence in our financial reporting; we may suffer defaults under our debt instruments; and our stock price may decline.

Further, we have incurred significant expense, including audit, legal, consulting, and other professional fees in connection with the restatement of our consolidated financial statements as of and for the years ended July 31, 2018 and 2017 and the remediation of the material weakness in our internal control over financial reporting. Our management's attention was also diverted from the operation of our business as a result of the time and attention required to address the remediation of the material weakness in our internal controls. In addition, we cannot assure you that we will not discover other material weaknesses in the future.

If another material misstatement occurs in the future, we may fail to meet our future reporting obligations. For example, we may fail to file periodic reports in a timely manner or may need to restate our financial results, either of which may cause the price of our stock to decline. Any failure of our internal controls could also adversely affect the results of the periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting that are required under Section 404 of the Sarbanes-Oxley Act. Effective internal controls are necessary for us to produce reliable financial reports and are important to help prevent financial fraud.

Our sales and implementation cycles are lengthy and variable, depend upon factors outside our control, and could cause us to expend significant time and resources prior to generating revenue.

The typical sales cycle for our products and services is lengthy and unpredictable, requires pre-purchase evaluation by a significant number of employees in our customers' organizations, often involves a significant operational decision by our customers, and could be affected by factors outside of our control. Our sales efforts involve educating our customers about the use and benefits of our products, including the technical capabilities of our products and the potential cost savings achievable by organizations deploying our products. Customers typically undertake a significant evaluation process, which frequently involves not only our products, but also those of our competitors. We spend substantial time, effort, and money in our sales efforts without any assurance that our efforts will produce sales, and our customers have significant negotiating power during the sales process which may result in a lengthy sales cycle and significant contractual complexity. Additionally, we may be unable to predict the size and terms of the initial contract until very late in the sales cycle which affects our ability to accurately forecast revenue. In addition, we sometimes commit to include specific functions in our base product offering at the request of a customer or group of customers and are unable to recognize revenue until the specific functions have been added to our products. Providing this additional functionality may be time consuming and may involve factors that are outside of our control. Customers may also insist that we commit to certain time frames in which systems built around our products will be operational or that once implemented our products will be able to meet certain operational requirements. Our ability to meet such timeframes and requirements may involve factors that are outside of our control, and failure to meet such timeframes and requirements could result in us incurring penalties and costs and/or making additional resource commitments, which would adversely affect our business and results of operations.

The implementation and testing of our products by our customers typically lasts 6 to 24 months or longer and unexpected implementation delays and difficulties can occur. Implementing our products typically involves integration with our customers' and third parties' systems, as well as adding customer and third-party data to our platform. This process can be complex, time consuming, and expensive for our customers and can result in delays in the implementation and deployment of our products. Failing to meet the expectations of our customers during the implementation of our products could result in a loss of customers and negative publicity about us and our products and services. Such failure could result from deficiencies in our product capabilities or inadequate service engagements by us, our SI partners, or our customers' employees, the latter two of which are beyond our direct control. The consequences of such failure could include and have included: monetary credits for current or future service engagements, reduced fees for additional product sales or upon renewals of existing licenses, and a customer's refusal to pay their contractually-obligated license, maintenance, or service fees. In addition, time-consuming implementations may also increase the amount of services personnel we must allocate to each customer, thereby increasing our costs and adversely affecting our business, results of operations, and financial condition.

Furthermore, our sales and implementation cycles could be interrupted or affected by other factors outside of our control. For example, we are closely monitoring the COVID-19 pandemic and its impacts on our business. We currently have formal restrictions on travel in place, which are in accordance with recommendations by the U.S. government and The Centers for Disease Control and Prevention, and our customers, SI partners, and prospects are likewise enacting their own preventative policies and travel restrictions. Widespread restrictions on travel and in-person meetings could affect services delivery, delay implementations, and interrupt sales activity and we cannot predict whether, for how long, or the extent to which the COVID-19 outbreak may adversely affect our business, results of operations, and financial condition.

Our large customers have substantial negotiating leverage, which may require that we agree to terms and conditions that result in increased cost of sales, decreased revenue, and lower average selling prices and gross margins, all of which could harm our results of operations.

Some of our customers include the world's largest P&C insurers. These customers have significant bargaining power when negotiating new licenses or subscriptions or renewals of existing agreements, and have the ability to buy similar products from other vendors or develop such systems internally. These customers have and may continue to seek advantageous pricing and other commercial and performance terms that may require us to develop additional features in the products we sell to them which add complexity to our customer agreements. We have been required to, and may continue to be required to, reduce the average selling price of our products in response to these pressures. If we are unable to avoid reducing our average selling prices, our results of operations could be harmed.

Our business depends on customers renewing and expanding their license, maintenance and subscription contracts for our products. A decline in our customer renewals and expansions could harm our future results of operations.

Our customers have no obligation to renew their term licenses or subscriptions after their contract period expires, and these licenses and subscriptions, if renewed, may be done so on less favorable terms. Moreover, under certain circumstances, our customers have the right to cancel their licenses or subscriptions before they expire. We may not accurately predict future trends in customer renewals. In addition, our perpetual license customers have no obligation to renew their maintenance arrangements after the expiration of the initial contractual period. Our customers' renewal rates may fluctuate or decline because of several factors, including their satisfaction or dissatisfaction with our products and services, the prices of our products and services, the prices of products and services offered by our competitors, reductions in our customers' spending levels due to the macroeconomic environment or other factors, or the sale of their operations to a buyer that is not a current customer.

Also, in some cases, our customers have a right to exercise a perpetual buyout of their term licenses at the end of the initial contract term, which if exercised would eliminate future term license revenue. If our customers do not renew their term licenses or subscriptions for our solutions or renew on less favorable terms, our revenue may decline or grow more slowly than expected and our profitability may be harmed.

Our customers may defer or forego purchases of our products or services in the event of weakened global economic conditions, political transitions, and industry consolidation.

General worldwide economic conditions remain unstable and prolonged economic uncertainties or downturns could harm our business operations or financial results. In particular, pursuant to a decision by referendum in June 2016, the United Kingdom (U.K.) voted to withdraw from the European Union ("Brexit"). The U.K. subsequently withdrew from the European Union on January 31, 2020, subject to a transition period that is set to end on December 31, 2020. Brexit has caused significant volatility in global stock markets and fluctuations in currency exchange rates. Brexit has also caused, and may continue to cause, delays in purchasing decisions by our potential and current customers affected by this transition due to the considerable political and economic uncertainty created by Brexit and uncertainty as to the nature of the U.K.'s long-term relationship with the European Union. Brexit may further result in new regulatory and cost challenges to our U.K. and global operations, particularly with respect to data protection. It is currently unclear how the U.K.'s decision to leave the European Union will affect the U.K.'s enactment of the European General Data Protection Regulation, and how data transfers to and from the U.K. will be regulated. Depending on the market and regulatory effects of Brexit, it is possible that there may be adverse practical or operational implications on our business, and prolonged economic uncertainties or downturns caused by Brexit could harm our business and results of operations.

Further, Brexit, or other global events such as the recent imposition of various trade tariffs by the United States and China and the COVID-19 pandemic, may continue to create global economic uncertainty, including inflationary pressures, in regions in which we have significant operations. These conditions may make it difficult for our customers and us to forecast and plan future business activities accurately, and they could cause our customers to reevaluate their decision to purchase our products, which could delay and lengthen our sales cycles or result in cancellations of planned purchases. Moreover, during challenging economic times our customers may face issues in gaining timely access to sufficient credit, which could result in an impairment of their ability to make timely payments to us. If that were to occur, we may not receive amounts owed to us and may be required to record an allowance for doubtful accounts, which would adversely affect our financial results. A substantial downturn in the P&C insurance industry may cause firms to react to worsening conditions by reducing their capital expenditures, reducing their spending on information technology, delaying or canceling information technology projects, or seek to lower their costs by renegotiating vendor contracts. Negative or worsening conditions in the general economy both in the United States and abroad, including conditions resulting from financial and credit market fluctuations, could cause a decrease in corporate spending on enterprise software in general, and in the insurance industry specifically, and negatively affect the rate of growth of our business.

Furthermore, the increased pace of consolidation in the P&C insurance industry may result in reduced overall spending on our products. Acquisitions of customers can delay or cancel sales cycles and because we cannot predict the timing or duration of such acquisitions, our results of operations could be materially impacted by the change in the industry.

Factors outside of our control, including, but not limited to, natural catastrophes and terrorism may adversely impact the P&C insurance industry, preventing us from expanding or maintaining our existing customer base and increasing our revenue.

Our customers are P&C insurers that have experienced, and will likely experience in the future, losses from catastrophes or terrorism that may adversely impact their businesses. Catastrophes can be caused by various events, including, without limitation, hurricanes, tsunamis, floods, windstorms, earthquakes, hail, tornadoes, explosions, severe weather, epidemics, pandemics, and fires. Global warming trends are contributing to an increase in erratic weather patterns globally and intensifying the impact of certain types of catastrophes. Moreover, acts of terrorism or war could cause disruptions to our business or our customers' businesses or the economy as a whole. The risks associated with natural catastrophes and terrorism are inherently unpredictable, and it is difficult to forecast the timing of such events or estimate the amount of losses they will generate. In recent years, for example, parts of the United States suffered extensive damage due to multiple hurricanes and fires and

Australia experienced extensive damage due to fires. The combined and expected effect of those losses on P&C insurers is significant. Such losses and losses due to future events may adversely impact our current or potential customers, which may prevent us from maintaining or expanding our customer base and increasing our revenue, as such events may cause customers to postpone purchases of new offerings and professional service engagements or to discontinue existing projects.

Our ability to sell our products is highly dependent on the quality of our professional services and technical support services and the support of our SI partners, and the failure of us or our SI partners to offer high-quality professional services or technical support services could damage our reputation and adversely affect our ability to sell our products and services to new customers and renew agreements with our existing customers.

If we or our SI partners do not effectively assist our customers in deploying our products, successfully help our customers quickly resolve post-deployment issues, and provide effective ongoing support, our ability to renew existing agreements and sell additional products and services to existing customers would be adversely affected and our reputation with potential customers could be damaged. Once our products are deployed and integrated with our customers' existing information technology environment, our customers may depend on our technical support services and/or the support of SI partners or internal resources to resolve any issues relating to our products. High-quality support is critical for the continued successful marketing and sale of our products. In addition, as we continue to expand our operations internationally, our support organization will face additional challenges, including those associated with delivering support, training, and documentation in languages other than English. Many enterprise customers 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 sell additional products and services to these customers, a key strategy for the growth of our revenue and profitability. In addition, as we further expand our cloud-based products, our professional services and support organization will face new challenges, including hiring, training, and integrating a large number of new professional services personnel with experience in delivering high-quality support for cloud-based offerings. Further, as we continue to rely on SIs to provide deployment and on-going services, our ability to ensure a high level of quality in addressing customer issues and providing a maintainable and efficient cloud environment could be diminished as we may be unable to control the quality or timeliness of the implementation of our products and services by our SI partners. Our failure to maintain high-quality implementation and support services, or to ensure that SIs provide the same, could have a material adverse effect on our business, results of operations, financial condition, and growth prospects.

If we are unable to continue the successful development of our global direct sales force and the expansion of our relationships with our strategic partners, sales of our products and services will suffer and our growth could be slower than we project.

We believe that our future growth will depend on the continued recruiting, retention, and training of our global direct sales force and their ability to obtain new customers, both large and small P&C insurers, and to manage our existing customer base. New hires require significant training and may, in some cases, take more than a year before becoming productive, if at all. If we are unable to hire and develop sufficient numbers of productive global direct sales personnel, sales of our products and services will suffer and our growth will be impeded.

We believe our future growth also will depend on the retention and expansion of successful relationships with SIs, including with SIs that will focus on products we may acquire in the future. Our SIs as channel partners help us reach additional customers. Our growth in revenue, particularly in international markets, will be influenced by the development and maintenance of this indirect sales channel which, in some cases, may require the establishment of effective relationships with regional SIs. Although we have established relationships with some of the leading SIs, our products and services may compete directly against products and services that such leading SIs support or market. Additionally, we are unable to control the quantity or quality of resources that our SI partners commit to implementing our products, or the quality or timeliness of such implementations, or the effects of the COVID-19 pandemic on our SI partners. If our partners do not commit sufficient or qualified resources to these activities, our customers will be less satisfied, be less supportive with references, or may require the investment of our resources at discounted rates. These, and other failures by our partners to successfully implement our products, would have an adverse effect on our business and our results of operations could fail to grow in line with our projections.

If we are unable to develop, introduce and market new and enhanced versions of our products, we may be put at a competitive disadvantage.

Our success depends on our continued ability to develop, introduce, and market new and enhanced versions of our products to meet evolving customer requirements. Because some of our products are complex and require rigorous testing, development cycles can be lengthy, taking us multiple years to develop and introduce new products or provide updates to our existing products. As we expand internationally, our products and services must be modified and adapted to comply with regulations and other requirements of the countries in which our customers do business. Additionally, market conditions may dictate that we change the delivery method of our products or the technology platform underlying our existing products or that new products be developed on different technology platforms, potentially adding material time and expense to our development cycles. The nature of these development cycles may cause us to experience delays between the time we incur expenses associated with research and development and the time we generate revenue, if any, from such expenses.

If we fail to develop new products, enhance our existing products, or migrate our products to the cloud, our business could be adversely affected, especially if our competitors are able to introduce products with enhanced functionality in the cloud. It is critical to our success for us to anticipate changes in technology, industry standards, and customer requirements and to successfully introduce new, enhanced, and competitive products to meet our customers' and prospective customers' needs on a timely basis. We have invested and intend to increase investments in research and development to meet these challenges. Revenue may not be sufficient to support the future product development that is required for us to remain competitive. If we fail to develop products in a timely manner that are competitive in technology and price or develop products that fail to meet customer demands, our market share will decline and our business and results of operations could be harmed. If our research and development efforts do not develop products or features that our customers find valuable, then we might incur impairment charges related to our capitalized software development costs.

We have implemented a new enterprise resource planning system as well as other accounting and sales systems. If these new systems prove ineffective, we may be unable to timely or accurately prepare financial reports, or invoice and collect from our customers.

We have completed the transition to our new enterprise resource planning ("ERP") system and other accounting systems, including a new revenue reporting system, as of the beginning of fiscal year 2019. These systems are critical for accurately maintaining books and records and preparing our consolidated financial statements. While we have invested significant amounts, including for additional personnel and third-party consultants, to implement these systems, we cannot be assured that we will not experience difficulties following the transition. Any errors in our new ERP system could adversely affect our operations, including our ability to accurately report our financial results in a timely manner, file our quarterly or annual reports with the SEC, and invoice and collect from our customers, each of which may harm our operations and reduce investor confidence. Data integrity problems or other issues may be discovered even though the transition is complete which, if not corrected, could impact our business, reputation, reporting, disclosures or results of operations. If we encounter unforeseen difficulties with our new ERP and revenue systems, there will be additional demands on our management team and our business, operations, and results of operations could be adversely affected.

If we are unable to retain our personnel and hire and integrate additional skilled personnel, we may be unable to achieve our goals and our business will suffer.

Our future success depends upon our ability to continue to attract, train, integrate, and retain highly skilled employees, particularly our executive officers, sales and marketing personnel, professional services personnel, cloud operations personnel, and software engineers, especially as we transition to a business model focused on delivering cloud-based offerings. Our inability to attract and retain qualified personnel, or delays in hiring required personnel, may seriously harm our business, results of operations, and financial condition. If U.S. immigration policy related to skilled foreign workers were materially adjusted, such a change could hamper our efforts to hire highly skilled foreign employees, including highly specialized engineers, which would adversely impact our business.

Any one of our executive officers and other key employees could terminate his or her relationship with us at any time. The loss of one or more of our executive officers or key employees, and any failure to have in place and execute an effective succession plan for key executive officers, could significantly delay or prevent us from achieving our business and/or development objectives and could materially harm our business. Changes in our executive management team may also cause disruptions in, and harm to, our business. Marcus Ryu, one of our co-founders and our former chief executive officer and president, transitioned to his role as chairman of the board of directors on August 3, 2019 and Mike Rosenbaum was appointed our chief executive officer. Further, on January 10, 2020, our chief financial officer notified us of his intent to resign from his position with the Company, effective following the filing of the Quarterly Report on Form 10-Q for the quarter ended January 31, 2020. Although we strive to reduce the challenges of these transitions, failure to ensure effective transfer of knowledge and a smooth transition could disrupt or adversely affect our business, results of operations, financial condition, and prospects.

We face competition for qualified individuals from numerous software and other technology companies. Competition for qualified personnel is particularly intense in the San Francisco Bay Area, where our headquarters are located, though we also face significant competition in all of our domestic and foreign development centers. Further, significant amounts of time and resources are required to train technical, sales, services, operations, and other personnel. We may incur significant costs to attract, train, and retain such personnel, and we may lose new employees to our competitors or other technology companies before we realize the benefit of our investment after recruiting and training them.

Also, to the extent that we hire personnel from competitors, we may be subject to allegations that such personnel have been improperly solicited or have divulged proprietary or other confidential information. In addition, we have a limited number of sales people and the loss of several sales people within a short period of time could have a negative impact on our sales efforts. We may be unable to attract and retain suitably qualified individuals who are capable of meeting our growing technical, operational, and managerial requirements, including managing employees and contractors remotely, or we may be required to pay increased compensation in order to do so.

Further, our ability to expand geographically depends, in large part, on our ability to attract, retain, and integrate managers to lead the local business and employees with the appropriate skills. Similarly, our profitability depends on our ability to effectively utilize personnel with the right mix of skills and experience to perform services for our clients, including our ability to transition employees to new assignments on a timely basis. If we are unable to effectively deploy our employees globally on a timely basis to fulfill the needs of our clients, our reputation could suffer and our ability to attract new clients may be harmed.

Because of the technical nature of our products and services and the dynamic market in which we compete, any failure to attract, integrate, and retain qualified direct sales, professional services, operations, and product development personnel, as well as our contract workers, could harm our ability to generate sales, deliver consulting services, manage our customers' cloud environments, or successfully develop new products and enhancements of existing products.

Real or perceived errors or failures in our products or implementation services may affect our reputation, cause us to lose customers and reduce sales which may harm our business and results of operations and subject us to liability for breach of warranty claims.

Because we offer complex products, undetected errors or failures may exist or occur, especially when products are first introduced or when new versions are released. Our products are often installed and used in large-scale computing environments with different operating systems, system management software and equipment, and networking configurations, which may cause errors or failures in our products or may expose undetected errors, failures, or bugs in our products. Despite testing by us, we may not identify all errors, failures, or bugs in new products or releases until after commencement of commercial sales or installation. In the past, we have discovered software errors, failures, and bugs in some of our product offerings after their introduction. Additionally, our Guidewire Cloud offerings rely on third-party hosting services. Any material disruption or slowdown in these services or the systems of third parties who we depend upon could cause outages or delays in our services which could harm our brand and adversely affect our operating results.

We provide our customers with upfront estimates regarding the duration, resources, and costs associated with the implementation of our products. Failure to meet these upfront estimates and the expectations of our customers could result from our product capabilities or service engagements performed by us, our SI partners, or our customers' employees, the latter two of which are beyond our direct control. The consequences could include, and have included: monetary credits for current or future service engagements, reduced fees for additional product sales, or a customer's refusal to pay its contractually-obligated fees. In addition, time-consuming implementations may also increase the amount of services personnel we must allocate to each customer, thereby increasing our costs and adversely affecting our business, results of operations, and financial condition.

The license, subscription, and support of our software creates the risk of significant liability claims against us. Our license and subscription agreements with our customers contain provisions designed to limit our exposure to potential liability claims. It is possible, however, that the limitation of liability provisions contained in such agreements may not be enforced as a result of international, federal, state, and local laws or ordinances or unfavorable judicial decisions. Breach of warranty or damage liability, or injunctive relief resulting from such claims, could harm our results of operations, and financial condition.

Failure of any of our established products or services to satisfy customer demands or to maintain market acceptance would harm our business, results of operations, financial condition, and growth prospects.

We derive a significant majority of our revenue and cash flows from our established product offerings, including Guidewire InsuranceSuite, Guidewire InsuranceNow, and our digital and data products. We expect to continue to derive a substantial portion of our revenue from these sources. As such, continued market acceptance of these products is critical to our growth and success. Demand for our products is affected by a number of factors, some of which are beyond our control, including the successful implementation of our products, the timing of development and release of new products by us and our competitors, technological advances that reduce the appeal of our products, changes in regulations that our customers must comply with in the jurisdictions in which they operate, and the growth or contraction in the worldwide market for technological solutions for the P&C insurance industry. If we are unable to continue to meet customer demands, to achieve and maintain a technological advantage over competitors, or to maintain market acceptance of our products, our business, results of operations, financial condition and growth prospects may be adversely affected.

Our international sales and operations subject us to additional risks that can adversely affect our business, results of operations, and financial condition.

We sell our products and services to customers located outside the United States, and we are continuing to expand our international operations as part of our growth strategy. In fiscal years 2019, 2018, and 2017, $272.9 million, $243.1 million, and $208.5 million of our revenue, respectively, was from customers outside of the United States. Our current international operations and our plans to expand our international operations subject us to a variety of risks, including:

- increased management, travel, infrastructure, and legal compliance costs associated with having multiple international operations;
- unique terms and conditions in contract negotiations imposed by customers in foreign countries;
- longer payment cycles and difficulties in enforcing contracts and collecting accounts receivable;
- the need to localize our products and licensing and subscription programs for international customers;
- lack of familiarity with and unexpected changes in foreign regulatory requirements;
- increased exposure to fluctuations in currency exchange rates;
- highly inflationary international economies, such as Argentina;
- the burdens and costs of complying with a wide variety of foreign laws and legal standards, including the General Data Protection Regulation in the European Union;
- compliance with the U.S. Foreign Corrupt Practices Act of 1977, as amended (“FCPA”), the U.K. Bribery Act and other anti-corruption regulations, particularly in emerging market countries;
- compliance by international staff with accounting practices generally accepted in the United States, including adherence to our accounting policies and internal controls;
- import and export license requirements, tariffs, taxes and other trade barriers;
- increased financial accounting and reporting burdens and complexities;
- weaker protection of intellectual property rights in some countries;
- multiple and possibly overlapping tax regimes;
- government sanctions that may interfere with our ability to sell into particular countries, such as Russia;
- disruption to our operations caused by epidemics or pandemics, such as COVID-19; and
- political, social, and economic instability abroad, terrorist attacks, and security concerns in general.

As we continue to expand our business globally, our success will depend, in large part, on our ability to anticipate and effectively manage these and other risks associated with our international operations. Any of these risks could harm our international operations and reduce our international sales, adversely affecting our business, results of operations, financial condition and growth prospects.

Failure to manage our expanding operations effectively could harm our business.

We have experienced consistent growth and expect to continue to expand our operations, including the number of employees and the locations and scope of our international operations. Additionally, the COVID-19 pandemic and related shelter in-place orders have resulted in our employees and contractors working from home, bringing new challenges to managing our business and work force. This expansion and changing work environment has placed, and will continue to place, a significant strain on our operational and financial resources and our personnel. To manage our anticipated future operational expansion effectively, we must continue to maintain and may need to enhance our information technology infrastructure and financial and accounting systems and controls, and manage expanded operations and employees in geographically distributed locations. Our growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of new products or investments in cloud operations. If we increase the size of our organization without experiencing an increase in sales of our products and services, we will experience reductions in our gross and operating margins and net income. If we are unable to effectively manage our expanding operations or manage the increase in remote employees, our expenses may increase more than expected, our revenue could decline or grow more slowly than expected, and we may be unable to implement our business strategy.

Failure to protect our intellectual property could substantially harm our business and results of operations.

Our success depends in part on our ability to enforce and defend our intellectual property rights. We rely upon a combination of trademark, trade secret, copyright, patent, and unfair competition laws, as well as license agreements and other contractual provisions, to do so.

We have filed, and may in the future file, patent applications related to certain of our innovations. We do not know whether those patent applications will result in the issuance of a patent or whether the examination process will require us to narrow our claims. In addition, we may not receive competitive advantages from the rights granted under our patents and other intellectual property. Our existing patents and any patents granted to us or that we otherwise acquire in the future, may be contested, circumvented, or invalidated, and we may not be able to prevent third parties from infringing these patents. Therefore, the extent of the protection afforded by these patents cannot be predicted with certainty. In addition, given the costs, effort, risks, and downside of obtaining patent protection, including the requirement to ultimately disclose the invention to the public, we may choose not to seek patent protection for certain innovations; however, such patent protection could later prove to be important to our business.

We also rely on several registered and unregistered trademarks to protect our brand. Nevertheless, competitors may adopt service names similar to ours, or purchase our trademarks and confusingly similar terms as keywords in Internet search engine advertising programs, thereby impeding our ability to build brand identity and possibly leading to confusion in the marketplace. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our trademarks. Any claims or customer confusion related to our trademarks could damage our reputation and brand and substantially harm our business and results of operations.

We attempt to protect our intellectual property, technology, and confidential information by generally requiring our employees and consultants to enter into confidentiality agreements and assignment of inventions agreements and third parties to enter into nondisclosure agreements, all of which offer only limited protection. These agreements may not effectively prevent unauthorized use or disclosure of our confidential information, intellectual property or technology and may not provide an adequate remedy in the event of unauthorized use or disclosure of our confidential information, intellectual property, or technology. Despite our efforts to protect our confidential information, intellectual property, and technology, unauthorized third parties may gain access to our confidential proprietary information, develop and market products or services similar to ours, or use trademarks similar to ours, any of which could materially harm our business and results of operations. In addition, others may independently discover our trade secrets and confidential information, and in such cases, we could not assert any trade secret rights against such parties. Existing United States federal, state, and international intellectual property laws offer only limited protection. The laws of some foreign countries do not protect our intellectual property rights to as great an extent as the laws of the United States, and many foreign countries do not enforce these laws as diligently as governmental agencies and private parties in the United States. Moreover, policing our intellectual property rights is difficult, costly, and may not always be effective.

From time to time, legal action by us may be necessary to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the intellectual property rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could negatively affect our business, reputation, results of operations, and financial condition. If we are unable to protect our technology and to adequately maintain and protect our intellectual property rights, we may find ourselves at a competitive disadvantage to others who need not incur the additional expense, time, and effort required to create the innovative products that have enabled us to be successful to date.

We and our customers rely on technology and intellectual property of third parties, the loss of which could limit the functionality of our products and disrupt our business.

We use technology and intellectual property licensed from unaffiliated third parties in certain of our products, and we may license additional third-party technology and intellectual property in the future. Any errors or defects in this third-party technology and intellectual property could result in errors that could harm our brand and business. In addition, licensed technology and intellectual property may not continue to be available on commercially reasonable terms, or at all. The loss of the right to license and distribute this third-party technology could limit the functionality of our products and might require us to redesign our products.

We may be obligated to disclose our proprietary source code to our customers, which may limit our ability to protect our intellectual property and could reduce the renewals of our support and maintenance services.

Our software license agreements typically contain provisions permitting the customer to become a party to, or a beneficiary of, a source code escrow agreement under which we place the proprietary source code for our applicable products in escrow with a third party. Under these escrow agreements, the source code to the applicable product may be released to the customer, typically for its use to maintain, modify, and enhance the product, upon the occurrence of specified events, such as our filing for bankruptcy, discontinuance of our maintenance services, and breaching our representations, warranties, or covenants of our agreements with our customers. Additionally, in some cases, customers have the right to request access to our source code upon demand. Some of our customers have obtained the source code for certain of our products by exercising this right, and others may do so in the future.

Disclosing the content of our source code may limit the intellectual property protection we can obtain or maintain for that source code or the products containing that source code and may facilitate intellectual property infringement claims against us. It also could permit a customer to which a product's source code is disclosed to support and maintain that software product without being required to purchase our support or maintenance services. Each of these could harm our business, results of operations, and financial condition.

Some of our services and technologies may use "open source" software, which may restrict how we use or distribute our services or require that we release the source code of certain products subject to those licenses.

Some of our services and technologies may incorporate software licensed under so-called "open source" licenses. In addition to risks related to license requirements, usage of open source software can lead to greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or controls on origin of the software. Additionally, some open source licenses require that source code subject to the license be made available to the public and that any modifications or derivative works to open source software continue to be licensed under open source licenses. These open source licenses typically mandate that proprietary software, when combined in specific ways with open source software, become subject to the open source license. If we combine our proprietary software in such ways with open source software, we could be required to release the source code of our proprietary software.

We take steps to ensure that our proprietary software is not combined with, and does not incorporate, open source software in ways that would require our proprietary software to be subject to many of the restrictions in an open source license. However, few courts have interpreted open source licenses, and the manner in which these licenses may be interpreted and enforced is therefore subject to some uncertainty. Additionally, we rely on hundreds of software programmers to design our proprietary technologies, and although we take steps to prevent our programmers from including objectionable open source software in the technologies and software code that they design, write and modify, we do not exercise complete control over the development efforts of our programmers and we cannot be certain that our programmers have not incorporated such open source software into our proprietary products and technologies or that they will not do so in the future. In the event that portions of our proprietary technology are determined to be subject to an open source license, we could be required to publicly release the affected portions of our source code, re-engineer all or a portion of our technologies, or otherwise be limited in the licensing of our technologies, each of which could reduce or eliminate the value of our services and technologies and materially and adversely affect our business, results of operations, and prospects.

Incorrect or improper use of our products or our failure to properly train customers on how to utilize our products could result in customer dissatisfaction and negatively affect our business, results of operations, financial condition, and growth prospects.

Our products are complex and are deployed in a wide variety of network environments. The proper use of our products requires training of the customer. If our products are not used correctly or as intended, inadequate performance may result. Our products may also be intentionally misused or abused by customers or their employees or third parties who are able to access or use our products. Because our customers rely on our products, services, and maintenance support to manage a wide range of operations, the incorrect or improper use of our products, our failure to properly train customers on how to efficiently and effectively use our products, or our failure to properly provide maintenance services to our customers may result in negative publicity or legal claims against us. Also, any failure by us to properly provide training or other services to existing customers will likely result in lost opportunities for follow-on and increased sales of our products and services.

In addition, if there is substantial turnover of customer personnel responsible for the use of our products, or if customer personnel are not well trained in the use of our products, customers may defer the deployment of our products, may deploy them in a more limited manner than originally anticipated, or may not deploy them at all. Further, if there is substantial turnover of the customer personnel responsible for use of our products, our ability to make additional sales may be substantially limited.

Our revenue, results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the Argentine Peso, Australian Dollar, Brazilian Real, British Pound, Canadian Dollar,

Danish Kroner, Euro, Indian Rupee, Japanese Yen, Malaysian Ringgit, New Zealand Dollar, Polish Zloty, Russian Ruble, and Swiss Franc.

The volatility of exchange rates depends on many factors that we cannot forecast with reliable accuracy. Although we believe our operating activities act as a natural hedge for a substantial portion of our foreign currency exposure at the cash flow or operating income level because we typically collect revenue and incur costs in the currency of the location in which we provide our applications and services, our relationships with our customers are long-term in nature so it is difficult to predict if our operating activities will provide a natural hedge in the future. In addition, because our contracts are characterized by large annual payments, significant fluctuations in foreign currency exchange rates that coincide with annual payments may affect our revenue or financial results in such quarter. Our results of operations may also be impacted by transaction gains or losses related to revaluing certain current asset and liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. Moreover, significant and unforeseen changes in foreign currency exchange rates may cause us to fail to achieve our stated projections for revenue and operating income, which could have an adverse effect on our stock price. For example, in fiscal year 2018, the Argentine economy became highly inflationary; however, our Argentina entity continues to have minimal activity through April 30, 2020. We will continue to experience fluctuations in foreign currency exchange rates, which, if material, may harm our revenue or results of operations.

Privacy concerns could result in regulatory changes and impose additional costs and liabilities on us, limit our use of information, and adversely affect our business.

As adoption of our cloud-based services occurs, the amount of customer data, including customer personal information, that we manage, hold, and/or collect continues to increase. In addition, a limited number of our product solutions may collect, process, store, and use transaction-level data aggregated across insurers using our common data model. We anticipate that over time we will continue to expand the use and collection of personal information as greater amounts of such personal information may be transferred from our customers to us and we recognize that personal privacy has become a significant issue in the United States, Europe, and many other jurisdictions where we operate. Many federal, state, and foreign legislatures and government agencies have imposed or are considering imposing restrictions and requirements about the collection, use, and disclosure of personal information.

Changes to laws or regulations affecting privacy could impose additional costs and liabilities, including fines, on us and could limit our use of such information to add value for customers, including for example, the California Consumer Privacy Act. If we were required to change our business activities or revise or eliminate services, or to implement burdensome compliance measures, our business and results of operations could be harmed. In addition, we may be subject to fines, penalties, and potential litigation if we fail to comply with applicable privacy and/or data security laws, regulations, standards, and other requirements. The costs of compliance with and other burdens imposed by privacy-related laws, regulations, and standards may limit the use and adoption of our product solutions and reduce overall demand.

Furthermore, concerns regarding data privacy and/or security may cause our customers' customers to resist providing the data and information necessary to allow our customers to use our product solutions effectively. Even the perception that the privacy and/or security of personal information is not satisfactorily managed, or does not meet applicable legal, regulatory, and other requirements, could inhibit sales of our products or services, and could limit adoption of our solutions, resulting in a negative impact on our sales and results from operations.

Privacy concerns in the European Union are evolving and we may face fines and other penalties if we fail to comply with these evolving standards, and compliance with these standards may increase our expenses and adversely affect our business and results of operations.

In the European Community, Directive 95/46/EC (the "Directive") has required European Union member states to implement data protection laws to meet the strict privacy requirements of the Directive, which has resulted in changes in previously accepted practices.

The European Union Commission has formally adopted a new mechanism for the transfer of personal data from the European Union to the United States, branded the "EU-US Privacy Shield" ("Privacy Shield"). We are currently certified with the U.S. Department of Commerce to comply with the Privacy Shield Framework, however, companies will continue to face uncertainty to the extent they operate in both jurisdictions and transfer any "Personal Data" between the two. If we are investigated by a European data protection authority and found to be out of compliance, we could face fines and other penalties. Any such investigation or charges by European data protection authorities could have a negative effect on our existing business and on our ability to attract and retain new customers.

While we will continue to undertake efforts to conform to current regulatory obligations and evolving best practices, we may be unsuccessful in conforming to means of transferring Personal Data from the European Economic Area ("EEA"). We may also experience hesitancy, reluctance, or refusal by European or multi-national customers to continue to use some of our services due to the potential risk exposure of Personal Data transfers and the current data protection obligations imposed on them by certain data protection authorities. Such customers may also view any alternative approaches to the transfer of any Personal Data as being too costly, too burdensome, or otherwise objectionable, and therefore may decide not to do business with us if the transfer of Personal Data is a necessary requirement.

Given our current transition to more cloud-based services and the current data protection landscape in the EU, we may be subject to greater risk of potential inquiries and/or enforcement actions. We may find it necessary to establish alternative systems to maintain Personal Data originating from the European Union in the EEA, which may involve substantial expense and may cause us to need to divert resources from other aspects of our business, all of which may adversely affect our results from operations. Further, any inability to adequately address privacy concerns in connection with our cloud-based services, or comply with applicable privacy or data protection laws, regulations, and policies, could result in additional cost and liability to us, and adversely affect our ability to offer cloud-based services.

In addition, despite the enactment of the UK Data Protection Act, which substantially implemented the European General Data Protection Regulation and became effective in May 2018, it remains unclear exactly how the withdrawal of the U.K. from the European Union will affect transborder data flows, regulators' jurisdiction over our business, and other matters related to how we do business and how we comply with applicable data protection laws in the U.K.

Anticipated further evolution of European Union regulations on this topic, including the impact of Brexit on these regulations in the U.K. and any related changes to the regulatory framework in the U.K., may increase substantially the penalties to which we could be subject in the event of any non-compliance. We may incur substantial expense in complying with the new obligations to be imposed by new regulations and we may be required to make significant changes to our software applications and expanding business operations, all of which may adversely affect our results of operations.

If tax laws change or we experience adverse outcomes resulting from examination of our income tax returns, it could adversely affect our results of operations.

We are subject to federal, state, and local income taxes in the United States and in foreign jurisdictions. Our future effective tax rates and the value of our deferred tax assets could be adversely affected by changes in tax laws, including impacts of the Tax Act and the CARES Act. The U.S. Treasury Department, the IRS, and other standard-setting bodies are expected to continue to interpret or issue guidance on how provisions of the Tax Act, including BEAT, will be applied or otherwise administered. As guidance is issued, we may make adjustments to amounts that we have previously recorded that may materially impact our financial statements in the period in which the adjustments are made and the amount of taxes that we may be required to pay could significantly increase.

In addition, we are subject to the examination of our income tax returns by the IRS and other tax authorities. We regularly assess the likelihood of adverse outcomes resulting from such examinations to determine the adequacy of our provision for income taxes. Significant judgment is required in determining our worldwide provision for income taxes. Although we believe we have made appropriate provisions for taxes in the jurisdictions in which we operate, changes in the tax laws or challenges from tax authorities under existing tax laws could adversely affect our business, financial condition and results of operations.

We may not be able to obtain capital when desired on favorable terms, if at all, and we may not be able to obtain capital or complete acquisitions through the use of equity without dilution to our stockholders.

We may need additional financing to execute on our current or future business strategies, including to develop new or enhance existing products and services, acquire businesses and technologies, or otherwise to respond to competitive pressures.

If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and newly-issued securities may have rights, preferences, or privileges senior to those of existing stockholders. If we accumulate additional funds through debt financing, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, thus limiting funds available for our business activities. We cannot be assured that additional financing will be available on terms favorable to us, or at all. If adequate funds are not available, or are not available on acceptable terms, when we desire them, our ability to fund our operations, take advantage of unanticipated opportunities, develop or enhance our products and services, or otherwise respond to competitive pressures would be significantly limited. Any of these factors could harm our results of operations.

Our business is subject to the risks of earthquakes, fire, floods, and other natural catastrophic events, and to interruption by man-made problems such as computer viruses.

Our corporate headquarters and the majority of our operations are located in the San Francisco Bay Area, a region known for seismic activity. A significant natural disaster, such as an earthquake, tsunami, fire, flood, epidemic, or pandemic, such as the COVID-19 pandemic, could have a material adverse impact on our business, results of operations, and financial condition. In addition, our information technology systems are vulnerable to computer viruses, break-ins, and similar disruptions from unauthorized tampering. To the extent that such disruptions result in delays or cancellations of customer orders or collections, or the deployment or availability of our products, our business, results of operations, and financial condition would be adversely affected.

Our stock price may be volatile, which could result in securities class action litigation against us.

The market price of our common stock could be subject to wide fluctuations in response to, among other things, the risk factors described in this report, and other factors beyond our control, such as fluctuations in the valuation of companies perceived by investors to be comparable to us and research analyst coverage about our business.

Furthermore, the stock markets have experienced price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions, such as recessions, interest rate changes, or international currency fluctuations, have and may continue to affect the market price of our common stock.

In the past, many companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may become the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

We currently do not intend to pay dividends on our common stock and, consequently, the only opportunity to achieve a return on investment is if the price of our common stock appreciates.

We currently do not plan to declare dividends on shares of our common stock in the foreseeable future. Consequently, the only opportunity to achieve a return on investment in our company will be if the market price of our common stock appreciates and shares are sold at a profit.

Certain provisions of our certificate of incorporation and bylaws and of Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our stock.

Our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could delay or prevent a merger, acquisition, or other change in control that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions may also prevent or delay attempts by stockholders to replace or remove our current management or members of our board of directors. These provisions include:

- not providing for cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- authorizing our board of directors to issue, without stockholder approval, preferred stock rights senior to those of common stock, which could be used to significantly dilute the ownership of a hostile acquirer;
- prohibiting stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- limiting the persons who may call special meetings of stockholders, which could delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- requiring advance notification of stockholder nominations and proposals, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

The affirmative vote of the holders of at least 66 2/3% of our shares of capital stock entitled to vote is generally necessary to amend or repeal the above provisions that are contained in our amended and restated certificate of incorporation. Also, absent approval of our board of directors, our amended and restated bylaws may only be amended or repealed by the affirmative vote of the holders of at least 50% of our shares of capital stock entitled to vote.

In addition, we are subject to the provisions of Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding common stock, from engaging in certain business combinations without approval of substantially all of our stockholders for a certain period of time.

These and other provisions in our amended and restated certificate of incorporation, our amended and restated bylaws, and under Delaware law could discourage potential takeover attempts, reduce the price that investors might be willing to pay for shares of our common stock in the future and result in the market price being lower than it would be without these provisions.

Further, while our board of directors has amended our amended and restated certificate of incorporation to gradually declassify our board of directors, our board of directors will be partially classified until the 2021 annual meeting of stockholders when the full board of directors will stand for reelection for a one-year term.

Risks Related to Our Indebtedness

Servicing our indebtedness requires a significant amount of cash. We may not have sufficient cash flow from our business to pay our substantial indebtedness, and we may not have the ability to raise the funds necessary to settle for cash conversions of the Convertible Senior Notes or to repurchase the Convertible Senior Notes upon a fundamental change, which could adversely affect our business and results of operations.

As of April 30, 2020, we had outstanding an aggregate principal amount of $400.0 million of the Convertible Senior Notes. Our indebtedness may increase our vulnerability to any generally adverse economic and industry conditions, and we and our subsidiaries may, subject to the limitations in the terms of our existing and future indebtedness, incur additional debt, secure existing or future debt or recapitalize our debt. If we incur additional indebtedness, the risks related to our business and our ability to service or repay our indebtedness would increase.

Pursuant to their terms, holders may convert their Convertible Senior Notes at their option prior to the scheduled maturities of their Convertible Senior Notes under certain circumstances. Upon conversion of the Convertible Senior Notes, unless we elect to deliver solely shares of our common stock to settle such conversion (other than paying cash in lieu of delivering any fractional share), we will be obligated to make cash payments. In addition, holders of our Convertible Senior Notes will have the right to require us to repurchase their Convertible Senior Notes upon the occurrence of a fundamental change (as defined in the Indenture, dated as of March 13, 2018, between the Company and U.S. Bank National Association, as trustee (the “Trustee”) (the “Base Indenture”), as amended and supplemented by the First Supplemental Indenture, dated as of March 13, 2018, between the Company and the Trustee (together with the Base Indenture, the “Indenture”)) at a repurchase price equal to 100% of the principal amount of the Convertible Senior Notes to be repurchased, plus accrued and unpaid interest, if any, to, but not including, the fundamental change purchase date. Although it is our intention and we currently expect to have the ability to settle the Convertible Senior Notes in cash, there is a risk that we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of Convertible Senior Notes surrendered therefor or Convertible Senior Notes being converted. In addition, our ability to make payments may be limited by law, by regulatory authority, or by agreements governing our future indebtedness. Our failure to repurchase Convertible Senior Notes at a time when the repurchase is required by the Indenture or to pay any cash payable on future conversions of the Convertible Senior Notes as required by such Indenture would constitute a default under such Indenture. A default under the Indenture or the fundamental change itself could also lead to a default under agreements governing our future indebtedness. If the repayment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the Convertible Senior Notes or make cash payments upon conversions thereof.

Our ability to make scheduled payments of the principal and interest on our indebtedness when due or to make payments upon conversion or repurchase demands with respect to our Convertible Senior Notes, or to refinance our indebtedness as we may need or desire, depends on our future performance, which is subject to economic, financial, competitive, and other factors beyond our control. Our business may not continue to generate cash flow from operations in the future sufficient to satisfy our obligations under our existing indebtedness, and any future indebtedness we may incur, and to make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as reducing or delaying investments or capital expenditures, selling assets, refinancing, or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance existing or future indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our existing or future indebtedness and have a material adverse effect on our business, results of operations, and financial condition.

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

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

Transactions relating to our Convertible Senior Notes may affect the value of our common stock.

The conversion of some or all of the Convertible Senior Notes would dilute the ownership interests of existing stockholders to the extent we satisfy our conversion obligation by delivering shares of our common stock upon any conversion of such Convertible Senior Notes. Our Convertible Senior Notes may become in the future convertible at the option of their holders under certain circumstances. If holders of our Convertible Senior Notes elect to convert their notes, we may settle our conversion obligation by delivering to them a significant number of shares of our common stock, which would cause dilution to our existing stockholders.

In connection with the issuance of the Convertible Senior Notes, we entered into 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 notes and/or offset any cash payments we are required to make in excess of the principal amount of converted notes, 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 Convertible Senior Notes. This activity could cause a decrease in the market price of our common stock.

The accounting method for convertible debt securities that may be settled in cash, such as the Convertible Senior Notes, could have a material effect on our reported financial results.

Under FASB Accounting Standards Codification 470-20 (“ASC 470-20”), Debt with Conversion and Other Options, an entity must separately account for the liability and equity components of convertible debt instruments (such as the Convertible Senior Notes) that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer’s economic interest cost. ASC 470-20 requires the value of the conversion option of the Convertible Senior Notes, representing the equity component, to be recorded as additional paid-in capital within stockholders’ equity in our consolidated balance sheets as an original issue discount to the Convertible Senior Notes, which reduces their initial carrying value. The carrying value of the Convertible Senior Notes, net of the discount recorded, will be accreted up to the principal amount of the notes from the issuance date until maturity, which will result in non-cash charges to interest expense in our consolidated statement of operations. Accordingly, we will report lower net income or higher net loss in our financial results because ASC 470-20 requires interest to include both the current period’s accretion of the debt discount and the instrument’s coupon interest, which could adversely affect our reported or future financial results, the trading price of our common stock, and the trading price of the Convertible Senior Notes.

In addition, under certain circumstances, convertible debt instruments (such as the Convertible Senior 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 the shares issuable upon conversion of the Convertible Senior Notes are not included in the calculation of diluted earnings per share except to the extent that the conversion value of the Convertible Senior Notes exceeds their principal amount. 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, 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. For example, the FASB recently published an exposure draft proposing to amend current accounting standards to eliminate the treasury stock method for convertible instruments and instead require application of the “if-converted” method. Under that method, if it is adopted, diluted earnings per share would generally be calculated assuming that all the Convertible Senior Notes were converted solely into shares of common stock at the beginning of the reporting period, unless the result would be anti-dilutive.

If we are unable to use the treasury stock method in accounting for the shares issuable upon conversion of the Convertible Senior Notes, then our diluted earnings per share would be adversely affected.

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

The option counterparties are financial institutions, and we will be subject to the risk that any or all of them might default under the capped call transactions. Our exposure to the credit risk of the option counterparties will not be secured by any collateral. Past global economic conditions have resulted in the actual or perceived failure or financial difficulties of many financial institutions. If an option counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at that time under the capped call transactions with such option counterparty. Our exposure will depend on many factors but, generally, an increase in our exposure will be correlated to an increase in the market price and in the volatility of our common stock. In addition, upon a default by an option counterparty, we may suffer 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.

ITEM 6. Exhibits

The exhibits listed below are filed or incorporated by reference as part of this Report.

Exhibit Number	Description	Incorporated by Reference From Form	Incorporated by Reference From Exhibit Number	Date Filed
3.1	Amended and Restated Certificate of Incorporation	10-Q	3.1	March 5, 2020
3.2	Amended and Restated Bylaws	8-K	3.1	December 5, 2016
4.1	Form of Common Stock certificate of the Registrant	S-1/A	4.1	January 9, 2012
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act	Filed herewith		
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act	Filed herewith		
32.1*	Certification of the Chief Executive Officer and the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act	Furnished herewith		
101.INS	Inline XBRL Instance Document	Filed herewith		
101.SCH	Inline XBRL Taxonomy Extension Schema Document	Filed herewith		
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document	Filed herewith		
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document	Filed herewith		
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document	Filed herewith		
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document	Filed herewith		
104	Cover Page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101)	Filed herewith		

* The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended. Such certifications will not be deemed to be incorporated by reference into any filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that the registrant specifically incorporates it by reference.

SIGNATURES

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

Date: June 3, 2020	**GUIDEWIRE SOFTWARE, INC.**
	By: /s/ JEFF COOPER
	Jeff Cooper **Chief Financial Officer** **(Principal Financial and Accounting Officer)**

Exhibit 31.1

**CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF
THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, Mike Rosenbaum, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Guidewire Software, 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;

   a) 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

   b) 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:	June 3, 2020	By:	/s/ MIKE ROSENBAUM
			Mike Rosenbaum
			Chief Executive Officer
			(Principal Executive Officer)

Exhibit 31.2

**CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF
THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, Jeff Cooper, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Guidewire Software, 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;

   a) 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

   b) 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:	June 3, 2020	By:	/s/ JEFF COOPER
			Jeff Cooper
			Chief Financial Officer
			(Principal Financial and Accounting Officer)

Exhibit 32.1

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

In connection with the Quarterly Report on Form 10-Q of Guidewire Software, Inc. for the quarterly period ended April 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Mike Rosenbaum, as Chief Executive Officer of Guidewire Software, Inc., hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Guidewire Software, Inc.

Date:	June 3, 2020	By:	/s/ MIKE ROSENBAUM
			Mike Rosenbaum
			Chief Executive Officer
			(Principal Executive Officer)

In connection with the Quarterly Report on Form 10-Q of Guidewire Software, Inc. for the quarterly period ended April 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Jeff Cooper, as Chief Financial Officer of Guidewire Software, Inc., hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Guidewire Software, Inc.

Date:	June 3, 2020	By:	/s/ JEFF COOPER
			Jeff Cooper
			Chief Financial Officer
			(Principal Financial and Accounting Officer)