

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

FORM 10-K

(Mark one)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended July 31, 2019

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
(State or other jurisdiction of
Incorporation or organization)

36-4468504
(I.R.S. Employer
Identification No.)

2850 S. Delaware St., Suite 400, San Mateo, California, 94403

(Address of principal executive offices, including zip code)

(650) 357-9100

(Registrant's telephone number, including area code)

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

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

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

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark whether the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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

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

The aggregate market value of common stock held by non-affiliates of the registrant, computed by reference to the closing price at which the common stock was sold on January 31, 2019, the last business day of the registrant's most recently completed second fiscal quarter, as reported on the New York Stock Exchange, was approximately \$4.4 billion. Shares of common stock held by each executive officer, director and holder of 5% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status does not reflect a determination that such persons are affiliates of the registrant for any other purpose.

On August 31, 2019, the registrant had 82,143,313 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement relating to its 2019 Annual Meeting of Stockholders are incorporated by reference into Part III of this report where indicated. Such Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days after the end of the fiscal year to which this report relates.

Guidewire Software, Inc.

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FORWARD-LOOKING STATEMENTS

The sections titled “Business” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” as well as other parts of this Annual Report on Form 10-K 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 “Item 1A. Risk Factors,” and elsewhere in this Annual Report on Form 10-K. 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;
- trends in future sales, including the mix of licensing and subscription arrangements and seasonality;
- our competitive environment and changes thereto;
- competitive attributes of our software applications and delivery models;
- challenges to further increase sales outside of the United States;
- our research and development 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;
- our provision for tax liabilities and other critical accounting estimates;
- the impact of new accounting standards and any contractual changes we have made in anticipation of such changes;
- the impact of restating our financial statements due to a material misstatement and the related identification of a material weakness in our system of internal controls;
- our exposure to market risks, including geographical and political events that may negatively impact our customers; 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 Annual Report on Form 10-K are based on information available to us as of the filing date of this Annual Report on Form 10-K 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.”

Item 1. Business

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 cloud and on-premise 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 that support the entire insurance lifecycle, 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 deployed on-premise or 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.

Guidewire delivers Software-as-a-Service (SaaS) via Guidewire Cloud™ on a subscription basis. Guidewire’s cloud products enable insurers to focus on business agility while transferring undifferentiating IT responsibilities to Guidewire. All Guidewire products are available via Guidewire Cloud and certain products are only available via Guidewire Cloud.

Our customers range from some of the largest global insurance carriers or their subsidiaries, such as Aviva, AXA, and Zurich to predominantly national carriers such as Basler Versicherung (Switzerland), Direct Line Group (U.K.), Farmers Insurance (U.S.), IAG (Australia), MS&AD (Japan), Nationwide (U.S.), PZU (Poland), and San Cristobal Seguros S.A. (Argentina) and carriers that serve specific states and/or regions such as Automobile Club of Southern California (California), Canadian Automobile Association Insurance Company (Ontario), Kentucky Farm Bureau (Kentucky), and Vermont Mutual Insurance Group (Vermont).

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.

We began our principal business operations in 2001. To date, we have primarily 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. Substantially all term licenses are sold with an initial two-year committed term with optional annual renewals commencing after the initial term. 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.

We also offer cloud-based subscriptions. These subscriptions generally 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 increase as a percentage of annual new sales and revenue as we sell more cloud-based services.

Services revenue is primarily derived from implementation and training services performed for our customers. Substantially all of our services revenue is billed on a time and materials basis.

Industry Background

The P&C insurance industry is large, fragmented, highly regulated, and complex. It is also highly competitive, with carriers competing primarily on the following factors: product differentiation, pricing options, customer service, marketing and advertising, affiliate programs, and channel strategies.

P&C insurers continue to actively modernize the transactional systems that support the key functional areas of P&C insurance: product definition, underwriting and policy administration, claims management, and billing. Product definition specifies the insurance coverage, pricing, and financial and legal terms of insurance policies. Underwriting and policy administration includes

collecting information from potential policyholders, determining appropriate coverages and terms, pricing policies, issuing policies, and updating and maintaining policies over their lifetimes. Claims management includes loss intake, investigation and evaluation of incidents, settlement negotiation, vendor management, litigation management and payment processing. Billing includes policyholder invoicing, payment collection, and agent commission calculation. We believe insurers that adopt modern infrastructures can enhance customer experience, operate more efficiently and introduce innovative products more rapidly.

We believe the P&C industry is experiencing accelerating change in how insurers engage with, sell to, and manage relationships with individual and business customers. Today, P&C insurers are striving to respond to significant changes in their competitive marketplace and the character of the risks they underwrite. The most significant changes include:

- a rise in customer expectations for digital, omni-channel interaction;
- a growth in demand for personalized products and services;
- an increase in technology-driven changes in vehicular risk;
- demand for coverage of “21st century risks” such as terrorism, cybersecurity, and reputational risk;
- advances in the use of data to better market to and engage with customers, price policies, and manage claims;
- development of opportunities to compete or partner with non-traditional players that offer disruptive technology-based value propositions; and
- the introduction and leveraging of new technologies, such as drones, artificial intelligence, the “Internet of Things,” and blockchain technology.

In response to these challenges and opportunities, we believe that the P&C insurance industry is entering a phase of increasing investment in technology, characterized by a moderated pace of core modernization programs, and growing adoption of new digital engagement and data analytics offerings.

While each insurer may have different goals and priorities when pursuing new technology investments, there are several major themes that we believe guide these investments:

- **Legacy Modernization**. A significant portion of the market continues to rely on legacy systems. We believe new claims, policy management, and billing systems will continue to be adopted as insurers that rely on legacy systems seek to gain operating efficiencies, expand into new markets and lines of business, and introduce new digital and data offerings.
- **New Digital Engagement Models**. We believe that insurers will need to provide a more intuitive, digital user experience to reduce the risk of customer dissatisfaction and loss. Investment in digital user experience will allow insurers to deepen their engagement with customers and transition from passive and transactional customer interactions to active and advisory relationships. This transition will require investments in software products that are designed to model user journeys and enable more frequent, informed, and dynamic interactions between insurers and their customers. We believe these efforts can improve financial performance for insurers through increased lead conversions and lower customer churn.
- **Cloud-Delivered Solutions**. We believe that increased recognition of the compelling economic benefits of deploying software solutions on public infrastructure combined with reduced concerns about the security and reliability of such platforms will cause more insurers to consider cloud-deployed solutions. Insurers benefit from an optimized division of labor and risk, allowing third parties to manage their infrastructure as they focus on competitively differentiating activities.
- **Smarter Decision-Making**. Insurers are seeking to explore, visualize, and analyze operational and third-party data to optimize decision-making across the insurance lifecycle. We believe that such predictive analytical solutions are most effective when they provide predictive scores and other analytical insights to insurers’ employees as they perform their underwriting and claims management activities.

Insurers may also apply data and machine learning to automate certain tasks whenever possible, thereby enabling efficiencies, such as straight-through processing, that lessen the burden on subject matter experts.

- **Innovation**. Insurers are under pressure to innovate across their product lifecycle in order to grow their business and improve service quality. Examples of focus areas include creating products to target under-insured risks such as cyber, supply chain disruption, and reputational and partnering with InsurTech providers to streamline operations and improve service to policyholders and agents.

Products

Guidewire InsurancePlatform is designed to offer insurers the ability to adapt and succeed in meeting these challenges and capitalize on new opportunities. We believe that the proliferation of modern back-office infrastructures has significantly increased the ability of insurers to utilize new solutions to grow revenue, reduce costs and losses, improve pricing and engage more deeply and in more intuitive ways with a customer base that is increasingly comfortable with mobile and automated forms of self-service and communication. We anticipate that we will continue to invest in research and development and strategic investments so that we may further assist insurers in reaching their business goals.

Core Operational Platforms

We offer two core operational platforms: Guidewire InsuranceSuite and Guidewire InsuranceNow.

Guidewire InsuranceSuite

Guidewire InsuranceSuite is comprised of three primary applications: PolicyCenter, BillingCenter, and ClaimCenter. We offer several add-on products designed to work seamlessly with these primary applications. InsuranceSuite is built on a unified technology platform that provides enhanced functionality and a common data model across applications, and is available on-premise and via the Guidewire Cloud.

Guidewire PolicyCenter is our flexible underwriting and policy administration application that serves as a comprehensive system-of-record supporting the entire policy lifecycle, including product definition, underwriting, quoting, binding, issuances, endorsements, audits, cancellations and renewals. Guidewire BillingCenter automates the billing lifecycle, enables the design of a wide variety of billing and payment plans, manages agent commissions, and integrates with external payment systems. Guidewire ClaimCenter offers end-to-end claims lifecycle management, including product definition, distribution, underwriting, policy holder services, and claims management.

Guidewire InsuranceNow

Guidewire InsuranceNow is a cloud-based platform for P&C insurers that offers policy, billing, and claims management functionality to insurers that prefer to subscribe to a cloud-based, all-in-one solution.

Guidewire InsuranceSuite: Add-on Applications

We offer a number of additional add-on applications for Guidewire InsuranceSuite.

Guidewire Underwriting Management

Guidewire Underwriting Management is a cloud-based, integrated business application designed for commercial and specialty line insurers to drive premium growth and profit from better underwriting. This feature-rich workstation delivers straight-through processing, exception-based underwriting, real-time collaboration, and knowledge management in one integrated solution. Guidewire Underwriting Management is typically sold alongside Guidewire PolicyCenter, although it functions with other policy administration systems as well.

Guidewire Rating Management

Guidewire Rating Management enables P&C insurers to manage the pricing of their insurance products.

Guidewire Reinsurance Management

Guidewire Reinsurance Management enables P&C insurers to use rules-based logic to execute their reinsurance strategy through their underwriting and claims processes.

Guidewire Client Data Management

Guidewire Client Data Management helps P&C insurers capitalize on customer information more coherently, overcoming traditional siloed practices that impair efficiency and customer service.

Guidewire Product Content Management

Guidewire Product Content Management provides software tools and standards-based, line-of-business templates to enable insurers to more rapidly introduce and modify products by reducing product configuration and maintenance efforts. Any such product introduction or modification must connect to and incorporate regulatory or industry-standard data and content, such as ISO content.

Guidewire AppReader

Guidewire AppReader is a submission intake management solution that enables P&C insurers to process Association for Cooperative Operations Research and Development (“ACORD”) forms faster and more accurately than with manual processes or traditional upload solutions. AppReader is available for both Guidewire Underwriting Management and Guidewire PolicyCenter.

Guidewire London Market Messaging

Guidewire London Market Messaging provides a message-processing and action framework with enhanced configuration to manage claims and settlement messages covering the Lloyd's of London market and the London Company Market, as well as subscription business multi-currency reserving. Guidewire London Market Messaging is a specialized add-on for Guidewire ClaimCenter customers.

Data Management and Analytics

We offer a variety of applications that allow insurers to consolidate, explore and analyze the data that is generated from their own operations and the data they capture from third-party sources.

Guidewire DataHub

Guidewire DataHub is an operational data store that unifies, standardizes and stores data from the patchwork of an insurer's systems as well as from external sources. DataHub enables carriers to accelerate legacy system replacement.

Guidewire InfoCenter

Guidewire InfoCenter is a business intelligence warehouse for P&C insurers that provides information in easy-to-use formats for business intelligence, analysis and enhanced decision making. With InfoCenter, customers gain flexible operational insights as well as the ability to optimize their business.

Guidewire Live Analytics

Guidewire Live Analytics is a cloud analytics platform that streams data from core systems and other sources into a scalable data infrastructure to enable smart business decisions. Guidewire Live Analytics applications are designed to complement Guidewire's operational systems, combining data from many different sources, core systems, anonymized benchmarks, and third-party data to enable real-time exploration and visualization for more precise decision-making. Guidewire Live Analytics applications include: Explore, Claim Canvas, Compare, and Spotlight.

Guidewire Predictive Analytics

Guidewire Predictive Analytics is a cloud-based tool which allows insurers to make data-driven decisions throughout the insurance lifecycle. By building predictive models from multiple data sets, analyzing model output, and deploying predictive models, insurers can realize significant reductions in loss ratio and expenses.

Guidewire Cyence Risk Analytics

Guidewire Cyence Risk Analytics is a cloud-native economic cyber risk modeling solution built to help the insurance industry quantify cyber risk and other underwriting exposures. It enables insurers to manage portfolio exposure accumulations and develop new products. Through a process called "data listening", Guidewire Cyence Risk Analytics collects technical and behavioral data from a variety of sources, including public data, open-source data, proprietary data, and third-party data.

Digital Engagement

Guidewire Digital Engagement Applications

Our Digital Engagement Applications enable insurers to provide digital experiences to customers, agents, vendors and field personnel through their device of choice. As consumers increasingly use self-service functions on the Internet and on mobile devices, we believe that many of them prefer to interact with their insurance providers digitally and that they expect to have a consistent and efficient transactional experience through multiple channels, whether online, in-person or by phone. Our Digital Engagement Applications also benefit agents and brokers who are seeking to automate business processes with insurers to improve customer service and productivity.

Technology

Our applications are designed to assist P&C insurers to grow their business, improve customer and agent engagement, lower operating costs and improve decision making. We have increased the scope of Guidewire InsurancePlatform through internal development and acquisitions. This growing scope has required greater investment in the development of application interfaces and shared services necessary to unify the operations and user experience across our applications. To meet the anticipated increased demand for cloud-delivered solutions, we have increased investments to leverage the growing number of technology services provided by on-demand infrastructure vendors such as Amazon with Amazon Web Services (AWS) and Microsoft with Azure. The shift to cloud-delivered solutions has also required significant focus in improving our ability to manage and operate our applications since our cloud-based deployments, unlike our on-premise implementations, shift many operational responsibilities to us. Finally, we continue to improve the scalability of our applications, which are required to perform millions of complex transactions that must balance on a daily basis. This accuracy must be maintained not only during normal business operations, but

also during extraordinary events such as catastrophes, which may result in extremely high transaction volume in a short period of time.

Services

Implementation Services

We provide implementation and integration services to help our customers realize the benefits of our software products and cloud-based services. Our implementation teams assist customers in building implementation plans, integrating our software with their existing systems, and defining business rules and specific requirements unique to each customer. We also partner with leading system integration consulting firms, certified on our software, to achieve scalable, cost-effective implementations for our customers.

Guidewire Production Services

Customers that contract with us for a cloud-based version of any Guidewire InsurancePlatform application receive access to our software, 24x7 technical management, monitoring and, in some cases, version upgrades. Customers may also receive additional services, such as defect fixes, regulatory updates, and minor platform delivery enhancements.

Customers

We market and sell our products to a wide variety of global P&C insurers ranging from some of the largest global insurers to national and regional carriers. We believe strong customer relationships are a key driver of our success given the long-term nature of our customer engagements and importance of customer references for new sales. We focus on developing and maintaining our customer relationships through customer service and account management. As of July 31, 2019, we had approximately 380 customers using one or more of our products in 34 countries.

Strategic Relationships

We have extensive relationships with system integration, consulting, technology, and industry partners. Our network of partners has expanded as interest in and adoption of our products has grown. 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 and enabling us to focus our engineering resources on continued innovation and further enhancement of our solutions.

As part of our PartnerConnect alliance program, we have a community of Solution Partners developing integration accelerators that enable their on-premise and cloud-based software solutions to interoperate with our products. As of July 31, 2019, more than 105 of these partner-developed integrations have been validated by us and awarded Ready for Guidewire branding. Guidewire Marketplace provides our customers with an online forum to learn about and download Ready for Guidewire integration accelerators for use with our products. These accelerators help customers reduce implementation risk and effort, and lower the total cost of implementation and operation. We anticipate expanding the reach of Guidewire Marketplace.

In fiscal year 2019, we launched DevConnect, our new developer environment that makes it easier for our partners to build integrations to InsurancePlatform and easier for our customers to adopt Insurtech innovations through InsurancePlatform. In the fourth quarter of fiscal year 2019, our Solution Partners published the first four add-ons built with DevConnect to the Guidewire Marketplace.

Sales and Marketing

Consistent with our industry focus and the mission-critical needs our products address, our sales and marketing efforts are tailored to communicate effectively to senior executives within the P&C industry. Our sales, marketing, and executive teams work together to cultivate long-term relationships with current and prospective customers in each of the geographies in which we are active.

Our direct sales team serves as both our exclusive sales channel and our account management function and is organized by geographic region across the Americas, EMEA, and APAC. We augment our sales professionals with a presales team possessing insurance domain and technical expertise, who engage customers in sessions to understand their specific business needs and then represent our products through demonstrations tailored to address those needs.

Our marketing team supports sales with competitive analysis and sales tools, while investing to strengthen our brand name and reputation. We participate at industry conferences, are published frequently in the industry press and have active relationships with all of the major industry analysts. We also host Connections, our annual user conference where customers both participate in and deliver presentations on a wide range of Guidewire and insurance technology topics. We invite potential customers and partners to our user conference, as we believe customer references are a key component of driving new sales. Our strong relationships

with leading system integrators enhance our direct sales through co-marketing efforts and by providing additional market validation of the distinctiveness and quality of our offerings.

Research and Development

Our research and development efforts focus on enhancing our products to meet the increasingly complex requirements of P&C insurers by broadening the capabilities and delivery options of Guidewire InsurancePlatform and its associated applications. These efforts are intended to help our customers improve their operations; drive greater digital engagement with their customers, agents and brokers; and gather, store and analyze data to improve business decisions. We also invest significantly in developing the product definitions and integrations necessary to have our applications meet the market requirements of each country or state in which we sell our software. This market-segment specific functionality must be updated regularly in order to stay current with regulatory changes in each market. We rely on a multi-national engineering team, which has grown organically and through acquisitions.

Competition

The software market that caters to the P&C insurance industry is highly competitive and fragmented. Increased spending by carriers on software solutions and the emergence of new platforms that have broadened from core system modernization to new digital engagement and data and analytics solutions have generated significant interest among investors and entrepreneurs. Increased capital allows market participants to adopt more aggressive go-to-market strategies, improve existing products, introduce new ones, and consolidate with other vendors. This market is also subject to changing technology preferences, shifting customer needs, and the introduction of cloud deployed solutions. These factors create an environment of increasing competition. Our current and future competitors vary in size and in the breadth and scope of the products and services they offer. As we expand our product portfolio, we may begin to compete with software and service providers we have not traditionally competed against. Our current competitors include, but are not limited to, internally developed proprietary solutions; P&C insurance software vendors such as Duck Creek, Insurity, Majesco, Prima Solutions, RGI, and Sapiens; and horizontal software vendors such as SAP.

Competitive factors in our industry depend on the product being offered and the size, geographic market, and line of business of potential customers. The principal competitive factors include product functionality, performance, customer references, total cost of ownership, solution completeness, implementation track record, and in-depth knowledge of the P&C insurance industry. We typically compete favorably on the basis of these factors in most geographies.

Intellectual Property

The software industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. Our success and ability to compete depend in part upon our ability to protect our proprietary technology, to establish and adequately protect our intellectual property rights, and to protect against third-party claims and litigation related to intellectual property. To accomplish these objectives, we rely on a combination of patent, trademark, copyright, and trade secret laws in the United States and other jurisdictions, as well as license agreements and other contractual protections. We own or have pending patents and patent applications, which generally apply to our software. Our owned patents have expiration dates starting in 2025. We also rely on several registered and unregistered trademarks, as well as pending applications for such registrations, in order to protect our brand both in the United States and internationally.

Employees

As of July 31, 2019, we had 2,355 employees, including 781 in professional services, 198 in technical support and licensing operations, 724 in research and development, 354 in sales and marketing, and 298 in general and administrative roles. As of July 31, 2019, we had 1,472 employees in the United States and 883 employees internationally. Our employees in the United States are not represented by a labor union, however, in certain foreign locations, there are workers' councils that represent our employees. We have not experienced any work stoppages and we consider our relations with our employees to be good.

Information about Segment and Geographic Revenue

Information about segment and geographic revenue is set forth in Note 11 of the Notes to Consolidated Financial Statements under Item 8 of this Annual Report on Form 10-K.

Seasonality

We have historically experienced seasonal variations in our license and subscription revenue as a result of increased customer orders in our second and fourth fiscal quarters. We generally see a modest increase in orders in our second fiscal quarter, which

is the quarter ending January 31, due to customer buying patterns. We also 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. This seasonal pattern, however, may be absent in any given year. Additionally, the adoption of the new revenue recognition standard, referred to as Accounting Standards Codification Topic 606, Revenue Recognition (“ASC 606”), has and could further heighten or change the seasonal impact on our new term licenses that are multi-year in nature with license revenue for the entire initial term recognized upfront upon delivery of our software. For example, in the first quarter of fiscal year 2019, we experienced license revenue growth due to the earlier timing of revenue recognition under ASC 606 for certain customer renewals and for a 10-year term license deal under which revenue was recognized upfront, which overshadowed the usual positive seasonal impact in our second quarter of fiscal year 2019. 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 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 are usually lower in these quarters. This seasonal pattern, however, may be absent in any given year.

WHERE YOU CAN FIND MORE INFORMATION

The following filings are available to view and download free of charge on our investor relations website as soon as reasonably practicable after we file them with the Securities and Exchange Commission (“SEC”): Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and our Proxy Statement for our annual meeting of stockholders. Our website is located at www.guidewire.com, and our investor relations website is located at <http://ir.guidewire.com/>. We also provide a link to the section of the SEC’s website at www.sec.gov that has all of our public filings, including periodic reports, proxy statements and other information.

We webcast our earnings calls and certain events we participate in or host with members of the investment community on our investor relations website. Additionally, we provide notifications of news or announcements regarding our financial performance, including SEC filings, investor events, press and earnings releases as part of our investor relations website. Investors and others can receive notifications of new information posted on our investor relations website in real time by signing up for email alerts and RSS feeds. Further corporate governance information, including our governance guidelines and code of business conduct and ethics, is also available on our investor relations website under the heading “Corporate Governance.” The contents of our websites are not intended to be incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

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

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:

- 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;
- introduction of cloud-based licensing models that feature ratable revenue recognition;
- increases in costs related to cloud operations, product development, and services costs;
- 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;
- increases in cloud-related development and services costs;
- erosion in services margins or significant fluctuations in services revenue caused by changing customer demand or negotiated professional services billing rates;
- 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 trade tariffs, trade agreements, and other uncertainties that may cause a delay in entering into or a failure to enter into significant customer agreements; and
- fluctuations in foreign currency exchange rates.

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, in light of the transition to ASC 606 for revenue recognition, our recent changes to the length of license agreements, and our increased cloud-based subscription services, among 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 second and fourth quarters of each fiscal year. We generally see increased new orders in our second fiscal quarter, which is the quarter ended January 31st, due to customer buying patterns, and 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 second and fourth fiscal quarters. 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. Further, the adoption of ASC 606 for revenue recognition has and may continue to heighten or change the seasonal impact on our new term licenses that are multi-year in nature with more revenue recognized upfront upon delivery of our software.

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. The concentration of sales in the second and fourth fiscal quarters, including sales of subscription services, may exacerbate this effect.

Our quarterly growth in license revenue also may not coincide with new orders or invoicing activity 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; and
- our term license agreements generally have annual billing arrangements over the initial term even though revenue is recognized upon delivery of the product,

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 due to the timing of customer renewals, which were amended in anticipation of the transition to ASC 606. 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.

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 economic, environmental, and world 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, 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 on-premises 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 divert 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 lack of historical experience with the costs of delivering cloud-based versions of our applications. Our subscription contracts also contain penalty clauses, for matters such as failing to meet stipulated service levels, which represent new risks we are not accustomed to managing. Should these penalties be triggered, our results of operations may be adversely affected. Furthermore, we may assume greater responsibilities for implementation related services during this transition. As a result, we may face risks associated with new and complex implementations, the cost of which may differ from original estimates. As with our stated history, penalties and cost 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 license revenue we otherwise would have recognized in the initial period of the customer agreement in those periods in which the portion of our revenue attributable to ratable subscription contracts grows. 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 during those periods. Additionally, the change in our business model and transition of our customers from on-premise 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 the subscription agreements we initially develop in connection with this transition, 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 increased customer demand for our service team involvement in 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 system integrators are willing and able to provide services 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, or if we require additional personnel on unexpectedly difficult projects to ensure customer success, perhaps without commensurate compensation.

Services margins may also decline if we are required to defer services revenue in connection with an engagement. This may happen if our term license and services are considered a combined performance obligation. In fiscal year 2017, for example, we deferred a significant amount of revenue and direct costs associated with one project, which reduced margins and reported services revenue during fiscal year 2017, and increased margins and services revenue during fiscal year 2018 when certain amounts of this deferred revenue and direct costs were recognized.

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.

The nature of our business requires the application of revenue and expense recognition guidance that requires management to make estimates and assumptions. Additionally, changes in accounting guidance on revenue recognition, such as the recent adoption of ASC 606, have caused and may cause us to experience greater volatility in our quarterly and annual results. If we are unsuccessful in adapting to the requirements of the new guidance, or in clearly explaining to stockholders how new guidance affects reporting of our results of operations, our stock price may decline.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements. 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.

While we believe that our financial statements have been prepared in accordance with accounting principles generally accepted in the United States, we cannot predict the impact of future changes to accounting principles or our accounting policies on our financial statements going forward. 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, as they were by the adoption of ASC 606.

The accounting rules and regulations that we must comply with are complex. Additionally, the Financial Accounting Standards Board (the “FASB”) and the SEC have focused on the integrity of financial reporting, and many companies’ accounting policies are being subject to heightened scrutiny by regulators and the public. Further, the accounting rules and regulations are continually changing in ways that could materially impact our financial statements.

The FASB issued ASC 606, accounting guidance on revenue recognition, that became effective for us on August 1, 2018. The standard permits the use of either the full retrospective or modified retrospective method. We selected the modified retrospective method, and we recorded a net increase to opening 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. This amount primarily represents revenue that would have been recognized in fiscal year 2019 under old guidance but would have been recognized prior to fiscal year 2019 under new guidance. The implementation of ASC 606 could cause the following risks:

- 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 under ASC 606.

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 our business 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 to greater volatility, the application of this new guidance may result in a material adverse effect on our recognized revenue and net income, despite no change in associated cash flows. Further, under ASC 606, more judgment and estimates will be required within the revenue recognition process than was required under previous GAAP. We currently anticipate that this standard could create additional volatility in our reported revenue and results of operations, which could negatively impact our stock price.

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 for the fiscal year ended July 31, 2018 under Item 8 of Part II of our Annual Report on 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 have become subject to a number of additional costs and 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 has been 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 this Annual Report on Form 10-K.

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 have undertaken 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, and may continue to incur, 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 has also been, and may further be, 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, and often involves a significant operational decision by our customers. 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 and can result in a lengthy sales cycle. We spend substantial time, effort, and money in our sales efforts without any assurance that our efforts will produce sales. Even if we succeed at completing a sale, we may be unable to predict the size of an initial license until very late in the sales cycle. 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 license 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 system integrator 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.

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 and may require us to develop additional features in the products we sell to them. 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. Prolonged economic uncertainties or downturns could harm our business operations or financial results. In particular, the decision by referendum to withdraw the United Kingdom (U.K.) from the European Union ("Brexit") in June 2016 caused significant volatility in global stock markets and fluctuations in currency exchange rates. The impending Brexit has caused and may continue to cause delays in purchasing decisions by our potential and current customers affected by this transition and there is considerable uncertainty as to when the long-term nature of the U.K.'s relationship with the European Union will be agreed and implemented. Any exit by the U.K. from the European Union may result in new regulatory and cost challenges to our U.K. and global operations. The outcome of the referendum has also created uncertainty with regard to the regulation of data protection in the U.K. In particular, it is unclear how the U.K.'s vote 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 terms reached regarding any exit from the European Union, it is possible that there may be adverse practical or operational implications on our business.

Further, Brexit, or other global events such as the recent imposition of various trade tariffs by the United States and China, may continue to create global economic uncertainty not only in the U.K., but in other 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, 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. The combined effect of those losses on P&C insurers was 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 system integration providers, and the failure of us or our system integration providers 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 system integration providers do not effectively assist our customers in deploying our products, succeed in helping 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 system integrators 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 system integrators to provide deployment and ongoing services, our ability to ensure a high level of quality in addressing customer issues is diminished. Our failure to maintain high-quality implementation and support services, or to ensure that system integrators 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 system integrators, including with system integrators that will focus on products we may acquire in the future. Our system integrators 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 systems integrators. Although we have established relationships with some of the leading system integrators, our products and services may compete directly against products and services that such leading system integrators support or market. We are unable to control the quantity or quality of resources that our system integrator partners commit to implementing our products, or the quality or timeliness of such implementation. 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. 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, 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. Further, as previously disclosed, Marcus Ryu, one of our co-founders and our former chief executive officer and president, transitioned to his new role as chairman of the board of directors on August 3, 2019. Although we strive to reduce the challenges of this transition and the appointment of our new chief executive officer, Mike Rosenbaum, 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, 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, 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, and product development personnel, as well as our contract workers, could harm our ability to generate sales, deliver consulting services, 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.

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 system integrator 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, and a customer's refusal to pay its 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.

The license 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 InsuranceSuite, 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, 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 derived from 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; 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. This expansion 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. 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, 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 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, Euro, Japanese Yen, Malaysian Ringgit, and Polish Zloty.

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 contracts 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 new Argentina entity continues to have minimal activity through July 31, 2019. 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 (the "EU") Commission has formally adopted a new mechanism for the transfer of personal data from the EU 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 EU 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.

Anticipated further evolution of EU regulations on this topic 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 Cuts and Jobs Act of 2017 (the “Tax 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 will be applied or otherwise administered. As future 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.

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, or a flood, 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:

- providing for a classified board of directors with staggered three-year terms, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- 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.

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 July 31, 2019, 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 1B. Unresolved Staff Comments

Not applicable.

Item 2. Properties

Our corporate headquarters in San Mateo, California consists of approximately 189,000 square feet of space leased through December 2029. As of July 31, 2019, we also lease facilities for our distributed sales, services and development centers, including in Bedford, Massachusetts; Birmingham, Alabama; Columbia, South Carolina; Edina, Minnesota; Exton, Pennsylvania; San Diego, California; San Jose, California; San Mateo, California; Dublin, Ireland; Krakow, Poland; London, United Kingdom; Madrid, Spain; Mississauga, Canada; Paris, France; Sydney, Australia; Tokyo, Japan; and Kuala Lumpur, Malaysia.

We believe that our facilities are suitable to meet our current needs. We intend to expand our facilities or add new facilities as we add employees and enter new geographic markets, and we believe that suitable additional or alternative space will be available as needed to accommodate any such growth. However, we expect to incur additional expenses in connection with such new or expanded facilities.

Item 3. 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 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 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity

Securities

Our common stock is listed on the New York Stock Exchange (“NYSE”) under the symbol “GWRE”.

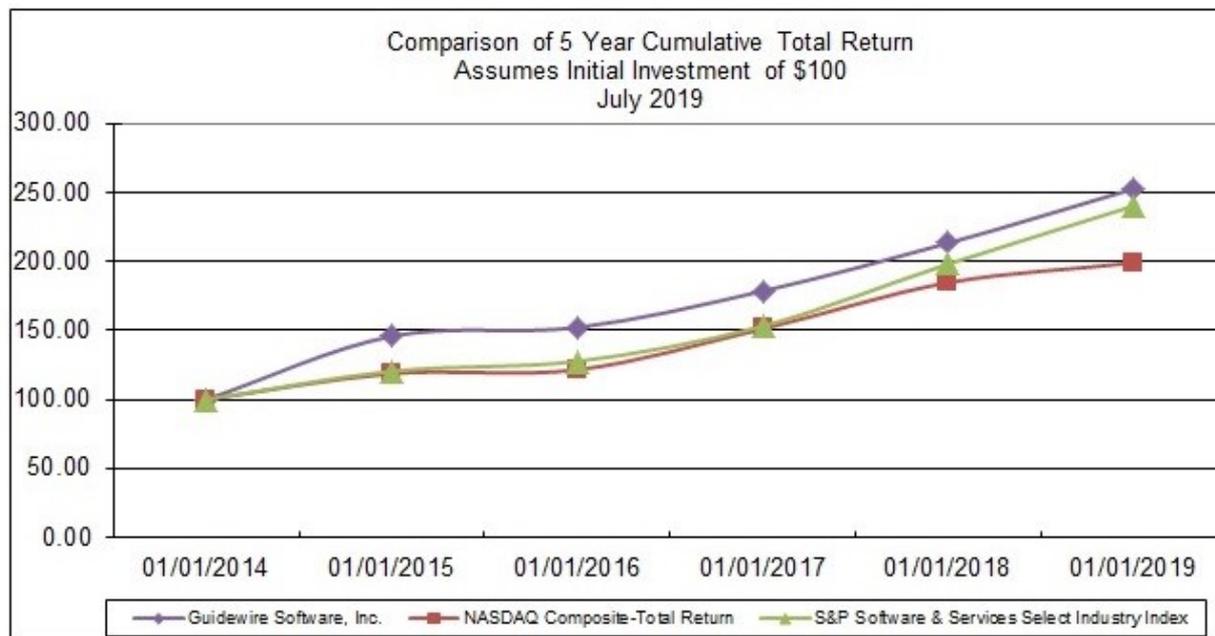
On July 31, 2019, the last reported sale price of our common stock on the New York Stock Exchange was \$102.08 per share. As of July 31, 2019, we had 55 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

We have never declared or paid, and do not anticipate declaring or paying, any cash dividends on our common stock. Any future determination as to the declaration and payment of dividends, if any, will be at the discretion of our board of directors and will depend on then existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects, and other factors our board of directors may deem relevant.

Performance Graph

This performance graph shall not be deemed “soliciting material” or to be “filed” with the Securities and Exchange Commission for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (“the Exchange Act”) or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any of our filings under the Securities Act of 1933, as amended (the “Securities Act”) or the Exchange Act.

The following graph shows a comparison of the cumulative total return for our common stock, the NASDAQ Composite-Total Return Index and S&P Software & Services Select Industry Index for the period from July 31, 2014 through July 31, 2019. Such returns are based on historical results and are not intended to suggest future performance. Data for the NASDAQ Composite Total Return Index and S&P Software & Services Select Industry Index assume reinvestment of dividends.



	<u>7/31/2014</u>	<u>7/31/2015</u>	<u>7/31/2016</u>	<u>7/31/2017</u>	<u>7/31/2018</u>	<u>7/31/2019</u>
Guidewire Software, Inc.	\$ 100.00	\$ 145.80	\$ 152.10	\$ 178.55	\$ 213.29	\$ 252.58
NASDAQ Composite-Total Return	\$ 100.00	\$ 118.71	\$ 121.51	\$ 151.17	\$ 184.62	\$ 198.92
S&P Software & Services Select Industry Index	\$ 100.00	\$ 120.50	\$ 127.63	\$ 153.20	\$ 198.10	\$ 240.16

Unregistered Sales of Equity Securities and Use of Proceeds from Registered Securities

None.

Issuer Purchases of Equity Securities

There were no repurchases of shares of our common stock made during the fiscal year ended July 31, 2019.

Item 6. Selected Financial Data**SELECTED CONSOLIDATED FINANCIAL DATA**

The following tables set forth selected financial data as of and for the last five fiscal years. This selected financial data should be read in conjunction with our historical financial statements, including the notes thereto, and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” included elsewhere in this report.

	Fiscal years ended July 31,				
	2019	2018	2017	2016	2015
	(in thousands, except share and per share data)				
Total revenue	\$ 719,514	\$ 652,849	\$ 509,533	\$ 424,446	\$ 380,537
Total cost of revenue	324,350	296,783	191,559	151,834	147,184
Total gross profit	395,164	356,066	317,974	272,612	233,353
Income (loss) from operations	1,471	(15,624)	21,861	16,437	16,493
Net income (loss)	\$ 20,732	\$ (26,743)	\$ 18,072	\$ 14,976	\$ 9,885
Net income (loss) per share:					
Basic	\$ 0.25	\$ (0.34)	\$ 0.24	\$ 0.21	\$ 0.14
Diluted	\$ 0.25	\$ (0.34)	\$ 0.24	\$ 0.20	\$ 0.14
Shares used in computing net income (loss) per share:					
Basic	81,447,998	77,709,592	73,994,577	72,026,694	70,075,908
Diluted	82,681,214	77,709,592	75,328,343	73,765,960	72,314,433

	As of July 31,				
	2019	2018	2017	2016	2015
	(in thousands)				
Cash, cash equivalents, and investments	\$ 1,337,761	\$ 1,258,100	\$ 687,788	\$ 735,802	\$ 677,752
Working capital	\$ 1,102,702	\$ 984,304	\$ 510,873	\$ 588,589	\$ 557,235
Total assets	\$ 2,166,963	\$ 1,981,433	\$ 1,078,901	\$ 916,178	\$ 799,947
Total stockholders’ equity	\$ 1,574,201	\$ 1,413,616	\$ 888,530	\$ 783,935	\$ 689,388

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis should be read in conjunction with our consolidated financial statements and related notes thereto included in Item 8 and the Risk Factors included in Item 1A of Part I of this Annual Report on Form 10-K. 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.

We have elected to omit discussion on the earliest of the three years covered by the consolidated financial statements presented. Refer to Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations located in our Form 10-K/A for the fiscal year ended July 31, 2018, filed on June 3, 2019, for reference to discussion of the fiscal year ended July 31, 2017, the earliest of the three fiscal years presented.

Overview

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

Guidewire InsurancePlatform™ consists of cloud and on-premise 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 lifecycle, 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 deployed on-premise or 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 on-premises licensing models. Sales to new customers also involve extensive customer due diligence and reference checks. We must earn credibility with each successful implementation as we expand our sales operations, market products that have been acquired or newly introduced, and expand the ways we deliver our software. 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, and the continued development of relevant local content and the automated tools that we believe are optimal for updating that content.

To date, we have primarily 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. Substantially all term licenses are sold with an initial two-year committed term with optional annual renewals commencing after the initial term. 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.

We also offer cloud-based subscriptions. 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 increase as a percentage of annual new sales and revenue as we sell more cloud-based services. 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 relatively new sales model matures, we may decide to change certain contract terms 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 IT 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 utilized 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 in increasing the number of qualified

consultants employed by our SI partners, developing relationships with new SIs in existing and new markets, and ensuring 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 a portion of our business to a more ratable revenue recognition model as we bring to market more cloud-based solutions, increasing the overall adoption of our products, and managing the infrastructure of 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 are designed to ensure customer success, both with on-premise and cloud-based solutions.

Acquisitions

On November 1, 2017, we completed the acquisition of Cyence, Inc. (“Cyence”), for an aggregate consideration of approximately \$260.3 million, including cash of approximately \$146.6 million and equity consideration valued at approximately \$113.7 million of newly issued Guidewire common stock and options, net of certain adjustments. Through the acquisition we gained a cloud-based data listening and risk analytics technology that enables the P&C insurance industry to grow by underwriting new and evolving risks, such as cyber risk, that have gone underinsured or uninsured. The results of Cyence’s operations have been included in our results of operations since November 1, 2017, the date of acquisition.

Public Offerings

On March 13, 2018, we closed a public offering of 2,628,571 shares of our common stock, including the underwriters’ exercise in full of their option to purchase additional shares of our common stock. The public offering price of the shares sold in the offering was \$87.50 per share. Our stockholders did not sell any shares in this public offering. Concurrently, we offered and sold \$400.0 million aggregate principal amount of our 1.25% Convertible Senior Notes due 2025 (the “Convertible Senior Notes”), including the underwriters’ exercise in full of their option to purchase additional Convertible Senior Notes. Net of issuance costs, we received net proceeds of approximately \$220.9 million related to the common stock offering and \$387.2 million related to the convertible note offering.

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 payment 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 consisted of purchases of property and equipment, most of which were computer hardware, software, capitalized software development costs, and leasehold improvements. In fiscal year 2019, free cash flow was impacted by \$23.6 million related to the build out and furnishing of our new corporate headquarters in San Mateo, California. For a further discussion of our operating cash flows, see “Liquidity and Capital Resources - Cash Flows.”

	Fiscal years ended July 31,	
	2019	2018
Net cash provided by operating activities	\$ 116,126	\$ 140,459
Net cash used for capital expenditures	(48,857)	(12,011)
Free cash flow	\$ 67,269	\$ 128,448

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 contracts. 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 increase 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.

As of July 31, 2019, ARR was \$460 million, up from \$412 million as of July 31, 2018. Our reported quarterly ARR results for fiscal year 2020 will be based on actual currency rates at the end of fiscal year 2019 and held constant throughout the year.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with GAAP. Accounting policies, methods, and estimates are an integral part of the preparation of our 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 our 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 consolidated financial statements that are described in Note 1 “The Company and a Summary of Significant Accounting Policies” to our consolidated financial statements, our revenue recognition policies are particularly critical to fiscal year 2019.

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 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 to our retained earnings. Refer to Note 1 to the consolidated financial statements included in our Annual Report on Form 10-K/A for the fiscal year ended July 31, 2018 for a description of our 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 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 consolidated financial statements included in this Annual Report on Form 10-K.

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:

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.

On-premise 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 aggregate value of the SSP 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, cloud transition arrangements generally provide for the customer to continue using its term license while the subscription services are being implemented, which requires an allocation between the term license and the subscription services. 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.

Recent Accounting Pronouncements

See Note 1 "The Company and Summary of Significant Accounting Policies" in the notes to the consolidated financial statements in Item 8 of Part II of this Annual Report on Form 10-K, for a full description of recent accounting pronouncements, including the expected dates of adoption, which is incorporated herein by reference.

Results of Operations

The following table sets forth our results of operations for the years presented. The data has been derived from the consolidated financial statements contained in this Annual Report on Form 10-K 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 years presented. The operating results for any period should not be considered indicative of results for any future period.

In fiscal year 2019, Guidewire began reporting results under ASC 606, using the modified retrospective method. Financial results for reporting periods prior to fiscal year 2019 are presented as previously disclosed in conformity with then existing guidance.

	Fiscal years ended July 31,			
	2019	As a % of Total Revenue	2018	As a % of Total Revenue
(in thousands except percentages)				
Revenue:				
License and subscription	\$ 385,322	53 %	\$ 309,007	47 %
Maintenance	85,424	12	77,337	12
Services	248,768	35	266,505	41
Total revenue	719,514	100	652,849	100
Cost of revenue:				
License and subscription	64,798	9	35,452	5
Maintenance	16,499	2	14,783	2
Services	243,053	34	246,548	38
Total cost of revenue	324,350	45	296,783	45
Gross profit:				
License and subscription	320,524	44	273,555	42
Maintenance	68,925	10	62,554	10
Services	5,715	1	19,957	3
Total gross profit	395,164	55	356,066	55
Operating expenses:				
Research and development	188,541	26	171,657	26
Sales and marketing	130,751	18	124,117	19
General and administrative	74,401	10	75,916	12
Total operating expenses	393,693	54	371,690	57
Income (loss) from operations	1,471	1	(15,624)	(2)
Interest income	30,182	4	13,281	2
Interest expense	(17,334)	(2)	(6,442)	(1)
Other income (expense), net	(1,867)	—	509	—
Income (loss) before provision for income taxes	12,452	3	(8,276)	(1)
Provision for (benefit from) income taxes	(8,280)	(1)	18,467	3
Net income (loss)	\$ 20,732	4 %	\$ (26,743)	(4)%

Comparison of the Fiscal Years Ended July 31, 2019 and 2018

Revenue

We derive our revenue primarily from licensing our software applications, providing maintenance and support, and delivering professional services. A growing portion of our revenue is derived from subscriptions of our cloud-delivered software.

We adopted ASC 606 effective August 1, 2018 using the modified retrospective method. Refer to Note 1 to our consolidated financial statements included in Item 8 of Part II of this Annual Report on Form 10-K for further details on the impact of ASC 606 as well as a description of our accounting policies related to revenue recognition.

License and subscription

A substantial majority of our license and subscription revenue consists of term license fees. We also recognize revenue from sales of subscriptions and perpetual licenses. Our term license revenue is primarily generated through annual license fees that recur during the term of the contract. Since the beginning of fiscal year 2017, a substantial majority of our term licenses have been sold under a two-year initial term with optional annual renewals after the initial term. Term license revenue for the initial term of the customer agreement is generally fully recognized upon delivery of the software, which accelerates the timing of revenue recognition compared to previous accounting guidance in effect during fiscal years 2017 and 2018.

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

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 unlike our term license arrangements that generally have a two-year initial term. Subscription agreements also contain optional annual renewals commencing upon the expiration of the initial contract term.

We generally price our software based on the amount of DWP that will be managed by our software. A majority of our term license and subscription customers are billed annually in advance. 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 maintenance term. Our maintenance fees are typically priced as a fixed percentage of the associated license fees. We generally invoice maintenance annually in advance.

Services

Our services revenue is primarily derived from implementation services performed for our customers, reimbursable travel expenses, and training fees in addition to customization work associated with subscription contracts acquired through the acquisition of ISCS, Inc., a provider of a cloud-based, all-in-one platform that offers policy, billing, and claims management functionality for P&C insurers ("ISCS"). A substantial majority of our services engagements are billed monthly on a time and materials basis and revenue is recognized upon providing our services.

	Fiscal years ended July 31,				Change	
	2019		2018		(\$)	(%)
	Amount	% of total revenue	Amount	% of total revenue		
(in thousands, except percentages)						
Revenue:						
License and subscription						
Term license	\$ 318,142	44%	\$ 263,793	40%	54,349	21
Subscription	65,050	9	33,401	5	31,649	95
Perpetual license	2,130	—	11,813	2	(9,683)	(82)
Maintenance	85,424	12	77,337	12	8,087	10
Services	248,768	35	266,505	41	(17,737)	(7)
Total revenue	\$ 719,514	100%	\$ 652,849	100%	66,665	10

License and subscription

Our license and subscription revenue primarily consists of term license revenue, subscriptions and, to a lesser extent, perpetual licenses. In certain periods prior to August 1, 2018, our reported license revenue was positively impacted by early receipt of payments due in future periods and negatively impacted by early payments received in preceding periods. Effective with our adoption of ASC 606 on August 1, 2018, revenue under term licenses is recognized upon delivery for the entire initial term rather than annually upon the earlier of receipt or when the payment is due.

Term license revenue increased by \$54.3 million, compared to the same period a year ago, primarily due to the timing of revenue recognition of term license renewals under ASC 606, a ten-year term license deal during fiscal year 2019, and term license revenue growth from increased adoption of our product offerings. Revenue from new customer agreements and renewals increased by \$37.2 million. Revenue from existing contract renewals, excluding the ten-year license agreement discussed below, increased due to the timing of renewals and the recognition of the term license portion of renewals at the renewal date as opposed to over time under previous revenue recognition guidance. Additionally, one existing customer entered into a new ten-year term license agreement that resulted in \$13.0 million of revenue being recognized during fiscal year 2019 that would have been recognized in years two through ten under previous revenue recognition guidance. Going forward, we anticipate the impact on the timing and amount of term license revenue under ASC 606 may cause us to experience greater volatility in our quarterly and annual results.

Subscription revenue increased by \$31.6 million, compared to the same period a year ago, primarily due to \$14.9 million in additional subscription orders from new and existing customers, \$12.3 million of hosting revenue related to our subscription offerings that is included as subscription revenue under ASC 606 that was previously included as services revenue under ASC 605, and \$4.1 million in additional Cyence subscription revenue, as Cyence was acquired on November 1, 2017.

While term licenses are currently our predominant licensing model, we anticipate subscriptions will continue to grow in future periods. As customers transition from term license to subscription agreements, the timing of revenue recognition will be impacted by allocations of revenue between different performance obligations. 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.

Perpetual license revenue decreased by \$9.7 million, compared to the same period a year ago, and accounted for approximately 1% of total license and subscription revenue in fiscal year 2019. We expect perpetual license revenue to continue to represent a small percentage of our total license and subscription revenue. Nevertheless, we expect perpetual license revenue to remain volatile across quarters due to the large amount of perpetual revenue that may be generated from a single customer order.

Maintenance Revenue

Maintenance revenue increased \$8.1 million, compared to the same period a year ago. The increase in our maintenance revenue reflects our growing term customer base. 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 an increase in subscription orders in the future will reduce the growth in maintenance revenue.

Services Revenue

Services revenue decreased \$17.7 million, compared to the same period a year ago. The decrease is primarily driven by lower revenue associated with a fixed fee contract in the current year as compared to fiscal year 2018 and the change in presentation of hosting revenue, investments in initial customer cloud implementations, partially offset by increases in professional services relating to projects for new and existing customers.

Historically, we have worked closely with our network of third-party SI partners to facilitate new sales and implementations of our on-premise products. We believe this model will continue to serve us well and we continue to expand our network of SI partners and the number of certified consultants with whom we work. With respect to Guidewire Cloud, our obligation to manage the platform in production requires us to have a greater familiarity with its configuration and integrations. At the time of acquisition, ISCS had few third-party resources to assist with implementations of InsuranceNow. As a result, we currently take primary responsibility for most InsuranceNow implementations.

As we gain experience with the deployment and maintenance of cloud solutions, we intend to leverage our SI partners more effectively and, over time, rely more on their efforts, similar to on-premise implementations. Reflecting this shift to SI partners, we anticipate services revenue to modestly decrease as a percentage of total revenue in future years as compared to fiscal year 2019.

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 we expect to, enter into contracts that may require us to delay the recognition of services revenue and associated costs until we are able to meet certain contractual obligations, including customer acceptance criteria or the delivery of new products, and contracts that are fixed in value and that 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 employees, cloud infrastructure costs, amortization of our intangible assets, and royalty fees paid to third parties. Our cost of maintenance

revenue 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 information technology support, information security, facilities, and other administrative costs to all functional departments based on headcount. As such, these general overhead expenses are reflected in cost of revenue and each functional operating expense.

Cost of Revenue:

	Fiscal years ended July 31,				Change	
	2019		2018		(\$)	(%)
	Amount	% of total revenue	Amount	% of total revenue		
(In thousands, except percentages)						
Cost of revenue:						
License and subscription	\$ 64,798	9%	\$ 35,452	5%	29,346	83
Maintenance	16,499	2	14,783	2	1,716	12
Services	243,053	34	246,548	38	(3,495)	(1)
Total cost of revenue	\$ 324,350	45%	\$ 296,783	45%	27,567	9
Includes stock-based compensation of:						
Cost of license and subscription revenue	\$ 3,011		\$ 1,002		2,009	
Cost of maintenance revenue	1,820		1,886		(66)	
Cost of services revenue	22,781		21,856		925	
Total	\$ 27,612		\$ 24,744		2,868	

The \$29.3 million increase in our cost of license and subscription revenue was primarily attributable to increases of \$14.9 million in personnel expenses, \$8.6 million in cloud infrastructure costs incurred in order to support the growth of our subscription offerings, \$3.3 million in royalties, \$1.8 million in professional services, and \$0.9 million related to the amortization of internal-use software development and acquired intangible assets. Cloud infrastructure costs include \$9.5 million of hosting related costs that were recorded in cost of services revenue in fiscal year 2018. The treatment of these hosting related costs is consistent with the treatment of the related revenue in each fiscal year.

We anticipate higher cost of license and subscription revenue as we continue to invest in our cloud operations to increase operational efficiency and scale while growing our customer base.

Cost of maintenance revenue increased by \$1.7 million primarily due to the increase in personnel required to support our term and perpetual license customers.

Our cost of services revenue would have increased if cloud infrastructure costs totaling \$9.5 million were not reclassified to cost of license and subscription revenue, consistent with the treatment of the related revenue. Excluding the impact of this reclassification, third-party consultants billable to customers primarily for InsuranceNow implementation engagements increased by \$3.2 million and personnel expenses related to new and existing employees increased by \$2.8 million.

We had 781 professional service employees and 198 technical support and licensing operations employees at July 31, 2019 compared to 838 professional services employees and 121 technical support and licensing operations employees at July 31, 2018.

Gross Profit

	Fiscal years ended July 31,					
	2019		2018		Change	
	Amount	margin %	Amount	margin %	(\$)	(%)
(In thousands, except percentages)						
Gross profit:						
License and subscription	\$ 320,524	83%	\$ 273,555	89%	46,969	17
Maintenance	68,925	81	62,554	81	6,371	10
Services	5,715	2	19,957	7	(14,242)	(71)
Total gross profit	<u>\$ 395,164</u>	<u>55%</u>	<u>\$ 356,066</u>	<u>55%</u>	<u>39,098</u>	<u>11</u>

Our gross margin remained 55% for fiscal year 2019, as compared to fiscal year 2018, even though gross margin for license and subscription and services declined, due to the growth in total revenue and the increase in license and subscription revenue as a percentage of overall revenue.

The decrease in license and subscription gross margin was a result of higher subscription revenue, which has more associated costs, and our investment in cloud operations. We intend to continue to invest in our cloud operations as our subscription revenue increases, which will continue to impact license and subscription margins.

The decrease in services gross margin was due to lower services revenue and the costs associated with a lower margin fixed-fee contract. We may not desire, or be able, to adjust our services costs, which are primarily personnel costs, as quickly as services revenue changes.

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 information technology support, information security, facilities, and other administrative costs to all functional departments based on headcount. As a result, general overhead expenses are reflected in cost of revenue and each functional operating expense.

	Fiscal years ended July 31,					
	2019		2018		Change	
	Amount	% of total revenue	Amount	% of total revenue	(\$)	(%)
(In thousands, except percentages)						
Operating expenses:						
Research and development	\$ 188,541	26%	\$ 171,657	26%	16,884	10
Sales and marketing	130,751	18	124,117	19	6,634	5
General and administrative	74,401	10	75,916	12	(1,515)	(2)
Total operating expenses	<u>\$ 393,693</u>	<u>54%</u>	<u>\$ 371,690</u>	<u>57%</u>	<u>22,003</u>	<u>6</u>

Includes stock-based compensation of:

Research and development	\$ 23,421		\$ 25,440		(2,019)	
Sales and marketing	19,246		18,387		859	
General and administrative	21,237		21,043		194	
Total	<u>\$ 63,904</u>		<u>\$ 64,870</u>		<u>(966)</u>	

Research and Development

Our research and development expenses primarily consist of personnel costs for our technical staff and consultants providing professional services.

The \$16.9 million increase in research and development expenses was primarily due to a \$15.5 million increase in personnel costs associated with higher average headcount in fiscal year 2019 driven by the Cyence acquisition, as well as a \$2.6 million increase in web hosting costs incurred in order to support the development of our new products including our subscription offerings, to enhance our existing products, and to migrate our products to the cloud, partially offset by a decrease of \$1.2 million in professional services costs.

Our research and development headcount was 724 as of July 31, 2019 compared with 749 as of July 31, 2018. Average headcount during fiscal year 2019, however, increased by 54 as compared to average headcount during fiscal year 2018, primarily due to the Cyence acquisition that closed on November 1, 2017, which resulted in increased personnel costs, despite the decrease in headcount as of the end of fiscal year 2019 versus the end of fiscal year 2018.

We expect our research and development expenses to increase in absolute dollars as we continue to hire and dedicate internal resources to developing, improving, and expanding the functionality of our solutions and migrating our solutions to the cloud. Research and development expenses may also increase if we pursue additional 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 \$6.6 million increase in sales and marketing expenses was primarily due to increases of \$14.2 million in personnel expenses due to higher headcount to sell our products and \$1.4 million due to the amortization of intangible assets, partially offset by a decrease of \$9.4 million due to the change in accounting for commission costs under ASC 606. Under ASC 606, certain commissions are capitalized when earned and expensed 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.

Our sales and marketing headcount was 354 as of July 31, 2019 compared with 329 as of July 31, 2018.

We expect our sales and marketing expenses to continue 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 \$1.5 million decrease in our general and administrative expenses was primarily attributable to a decrease in professional services of \$10.2 million, partially offset by increases of \$6.1 million in personnel expenses due to higher headcount and \$2.5 million in software and cloud infrastructure costs to support our growth. Professional services were higher in the prior year period as a result of professional services incurred in connection with our acquisition of Cyence and implementation costs of a new enterprise resource planning platform and a new product configuration and quoting system.

Our general and administrative headcount was 298 as of July 31, 2019 compared with 255 as of July 31, 2018. General and administrative headcount includes personnel in information technology support, information security, and facilities, which 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)

	Fiscal years ended July 31,		Change	
	2019	2018		
	Amount	Amount		
	(In thousands, except percentages)			
Interest income	\$ 30,182	\$ 13,281	16,901	127
Interest expense	\$ (17,334)	\$ (6,442)	(10,892)	169
Other income (expense), net	\$ (1,867)	\$ 509	(2,376)	(467)

Interest Income

Interest income represents interest earned on our cash, cash equivalents, and investments.

Interest income increased by \$16.9 million in fiscal year 2019. The increase in our interest income is associated with the increase in invested funds, primarily as a result of proceeds of approximately \$600 million related to the common stock and convertible note offering in March 2018 and, to a lesser extent, higher yields on those invested funds.

Interest Expense

Interest expense includes 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. Accordingly, interest expense in fiscal year 2019 is higher than fiscal year 2018 as the notes were only outstanding for part of fiscal year 2018.

Interest expense increased \$10.9 million in fiscal year 2019, compared to the same period a year ago. Interest expense for fiscal year 2019 consists of non-cash interest expense of \$12.2 million related to the amortization of debt discount and issuance costs and stated interest of \$5.0 million.

Other Income (Expense), Net

Other income (expense), net consists primarily of 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, Euro, Japanese Yen, Malaysian Ringgit, and Polish Zloty.

We realized a net currency exchange loss of \$1.9 million in fiscal year 2019 as compared to a net currency exchange gain of \$0.5 million in fiscal year 2018 as a result of exchange rate movements on foreign currency denominated accounts against the US Dollar.

Provision for 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 current U.S. income tax.

	Fiscal years ended July 31,		Change	
	2019	2018		
	Amount	Amount	(\$)	(%)
	(In thousands, except percentages)			
Provision for (benefit from) income taxes	\$ (8,280)	\$ 18,467	(26,747)	(145)
Effective tax rate	(66)%	(223)%		

We recognized an income tax benefit of \$8.3 million for fiscal year 2019 compared to an income tax provision of \$18.5 million for fiscal year 2018. The fiscal year 2018 income tax provision was primarily due to a one-time provisional net charge from re-measuring deferred tax assets and liabilities in the quarter ended January 31, 2018 as a result of the Tax Cuts and Jobs Act (the "Tax Act"). The effective tax rate of (66)% for fiscal year 2019, 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, the tax rate differences between the United States and foreign countries, foreign withholding taxes, and certain non-deductible expenses including executive compensation.

As of July 31, 2019, we had unrecognized tax benefits of \$6.2 million that, if recognized, would affect our effective tax rate.

On December 22, 2017, the Tax Act was enacted into law which substantially changed U.S. tax law, including a reduction in the U.S. corporate income tax rate to 21% effective January 1, 2018 and several provisions that may impact us in current and future periods. The Tax Act includes a provision to tax global intangible low-taxed income ("GILTI") of foreign subsidiaries, a special deduction for foreign-derived intangible income, and a base erosion anti-abuse tax ("BEAT") measure that taxes certain payments between a U.S. corporation and its foreign subsidiaries. These provisions of the Tax Act became effective for us beginning on August 1, 2018 and had no impact on the tax benefit for fiscal year 2019.

Under GAAP, we can make an accounting policy election to either treat taxes due on the GILTI inclusion as a current period expense or factor such amounts into our measurement of deferred taxes. We have elected the current period expense method.

In December 2018, the Internal Revenue Service (the "IRS") issued proposed regulations related to the BEAT tax, which we are in the process of evaluating. If the proposed BEAT regulations are finalized in their current form, the impact may be material to the tax provision in the quarter of enactment.

The U.S. Treasury Department, the IRS, and other standard-setting bodies will continue to interpret or issue guidance on how provisions of the Tax Act will be applied or otherwise administered. We continue to obtain, analyze, and interpret guidance

as it is issued and will revise our estimates as additional information becomes available. Any legislative changes, including any other new or proposed U.S. Department of the Treasury regulations that have yet to be issued, may result in income tax adjustments which could be material to our provision for income taxes and effective tax rate in the period any such changes are enacted. We have finalized our assessment of the transitional impacts of the Tax Act.

Comparison of the Fiscal Years Ended July 31, 2018 and 2017

Refer to Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations located in our 10-K/A for the fiscal year ended July 31, 2018, filed on June 3, 2019, for the discussion of the comparison of the fiscal year ended July 31, 2018 to the fiscal year ended July 31, 2017, the earliest of the three fiscal years presented in the consolidated financial statements.

Quarterly Results of Operations

The following table sets forth our selected unaudited quarterly financial information for each of the eight fiscal quarters ended July 31, 2019. In management's opinion, the data below has been prepared on the same basis as the audited consolidated financial statements and reflect all necessary adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of the data. The results of historical periods are not necessarily indicative of the results to be expected for a full year or any future period.

	Fiscal quarters ended							
	July 31, 2019	April 30, 2019	January 31, 2019	October 31, 2018	July 31, 2018	April 30, 2018	January 31, 2018	October 31, 2017
	(unaudited) (in thousands, except per share amounts)							
Total revenue	\$ 207,858	\$ 162,867	\$ 168,534	\$ 180,255	\$ 240,260	\$ 142,149	\$ 160,226	\$ 110,214
Total cost of revenue	82,784	80,278	79,680	81,608	90,480	75,681	67,516	63,106
Total gross profit	125,074	82,589	88,854	98,647	149,780	66,468	92,710	47,108
Income (loss) from operations	21,082	(15,767)	(6,331)	2,487	48,101	(28,867)	(3,974)	(30,884)
Net income (loss)	\$ 23,005	\$ (8,581)	\$ (1)	\$ 6,309	\$ 58,777	\$ (31,150)	\$ (51,620)	\$ (2,750)
Income (loss) per share - basic	\$ 0.28	\$ (0.11)	\$ —	\$ 0.08	\$ 0.73	\$ (0.40)	\$ (0.67)	\$ (0.04)
Income (loss) per share - diluted	\$ 0.28	\$ (0.11)	\$ —	\$ 0.08	\$ 0.72	\$ (0.40)	\$ (0.67)	\$ (0.04)

Our quarterly results of operations may fluctuate significantly due to a variety of factors, many of which are outside of our control, making our results of operations variable and difficult to predict. Such factors include those discussed above and those set forth in “Risk Factors—We may experience significant quarterly and annual fluctuations in our results of operations due to a number of factors” and “Risk Factors—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” in Item 1A of Part I of this Annual Report on Form 10-K. One or more of these factors may cause our results of operations to vary widely. As such, we believe that our quarterly results of operations may vary significantly in the future and that sequential quarterly comparisons of our results of operations may not be meaningful and should not be relied upon as an indication of future performance.

Non-GAAP Financial Measures

We believe that the following non-GAAP financial measures, along with Free Cash Flow and ARR presented above, 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 tables reconcile the specific items excluded from GAAP in the calculation of non-GAAP financial measures for the periods indicated below:

	Fiscal years ended July 31,	
	2019	2018
Income (loss) from operations reconciliation:		
GAAP income (loss) from operations	\$ 1,471	\$ (15,624)
Non-GAAP adjustments:		
Stock-based compensation ⁽¹⁾	91,516	89,614
Amortization of intangibles ⁽¹⁾	29,113	27,462
Non-GAAP income (loss) from operations	<u>\$ 122,100</u>	<u>\$ 101,452</u>
Net income (loss) reconciliation:		
GAAP net income (loss)	\$ 20,732	\$ (26,743)
Non-GAAP adjustments:		
Stock-based compensation ⁽¹⁾	91,516	89,614
Amortization of intangibles ⁽¹⁾	29,113	27,462
Amortization of debt discount and issuance costs ⁽²⁾	12,194	4,512
Tax impact of non-GAAP adjustments ⁽³⁾	(33,678)	(9,777)
Non-GAAP net income (loss)	<u>\$ 119,877</u>	<u>\$ 85,068</u>
Tax provision (benefit) reconciliation:		
GAAP tax provision (benefit)	\$ (8,280)	\$ 18,467
Non-GAAP adjustments:		
Stock-based compensation ⁽¹⁾	15,800	25,296
Amortization of intangibles ⁽¹⁾	5,033	7,661
Amortization of debt discount and issuance costs ⁽²⁾	2,117	1,160
Tax impact of non-GAAP adjustments ⁽³⁾	10,728	(24,340)
Non-GAAP tax provision (benefit)	<u>\$ 25,398</u>	<u>\$ 28,244</u>
Net income (loss) per share reconciliation:		
GAAP net income (loss) per share - diluted	\$ 0.25	\$ (0.34)
Non-GAAP adjustments:		
Stock-based compensation ⁽¹⁾	1.11	1.15
Amortization of intangibles ⁽¹⁾	0.36	0.35
Amortization of debt discount and issuance costs ⁽²⁾	0.16	0.06
Tax impact of non-GAAP adjustments ⁽³⁾	(0.42)	(0.14)
Non-GAAP dilutive shares excluded from GAAP net income (loss) per share calculation ⁽⁴⁾	(0.01)	(0.01)
Non-GAAP net income (loss) per share - diluted	<u>\$ 1.45</u>	<u>\$ 1.07</u>
Shares used in computing Non-GAAP income (loss) per share amounts:		
GAAP weighted average shares - diluted	82,681,214	77,709,592
Non-GAAP dilutive shares excluded from GAAP income (loss) per share calculation ⁽⁴⁾	—	1,785,533
Pro forma weighted average shares - diluted	<u>82,681,214</u>	<u>79,495,125</u>

(1) Adjustments relate to amortization of acquired intangibles and stock-based compensation recognized during the period for GAAP purposes.

(2) Adjustments reflect the amortization of debt discount and issuance costs related to the issuance of our Senior Convertible Notes recognized during the period for GAAP purposes.

(3) Adjustments reflect the tax benefit (provision) resulting from all non-GAAP adjustments.

(4) 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.

Liquidity and Capital Resources

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

	July 31, 2019	July 31, 2018
Cash, cash equivalents, and investments	\$ 1,337,761	\$ 1,258,100
Working capital	\$ 1,102,702	\$ 984,304

Cash, Cash Equivalents, and Investments

Our cash equivalents are comprised of 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 securities, commercial paper, and non-U.S. government securities, which include state, municipal and foreign government securities.

As of July 31, 2019, approximately \$41.3 million of our cash and cash equivalents were domiciled in various 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 and annual bonus payments, as well as payments of payroll, 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 during that period and pay seasonally higher sales commissions from increased customer orders booked in our fourth fiscal quarter.

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 expansion of our sales and marketing activities, the timing and extent of our spending to support our research and development efforts, investments in cloud infrastructure and operating costs, and expansion into other markets. We also may invest in or acquire complementary businesses, applications, or technologies, which may require the use of significant cash resources and/or additional financing.

The following summary of cash flows for the periods indicated has been derived from our consolidated financial statements included elsewhere in this Annual Report on Form 10-K (in thousands):

	Fiscal years ended July 31,	
	2019	2018
Net cash provided by operating activities	\$ 116,126	\$ 140,459
Net cash used in investing activities	\$ (301,433)	\$ (537,584)
Net cash provided by financing activities	\$ 3,954	\$ 573,000

Cash Flows from Operating Activities

Net cash provided by operating activities decreased by \$24.3 million in fiscal year 2019 as compared to fiscal year 2018. The decrease in operating cash was primarily attributable to a \$51.0 million increase in cash used in working capital activity as compared to the same period a year ago, partially offset by a \$26.7 million increase in net income after excluding the impact of non-cash charges such as deferred taxes, stock-based compensation expense, depreciation and amortization expense, and other non-cash items.

Cash Flows from Investing Activities

Our investing activities consist primarily of purchases and sales of short-term and long-term investments, capital expenditures to purchase property and equipment, acquisitions, and changes in our strategic equity investment. In the future, we expect we will continue to invest in capital expenditures to support our expanding operations, like we did in fiscal year 2019 for our new headquarters in San Mateo, California and an office in Madrid, Spain.

Net cash used in investing activities decreased by \$236.2 million in fiscal year 2019 as compared to fiscal year 2018. The decrease in net cash used in investing activities was primarily due to a \$142.9 million change in net cash flows from marketable securities transactions and \$130.1 million in net cash outflows due to the acquisition of Cyence in November 2017 during fiscal

year 2018, partially offset by a \$36.8 million increase in capital expenditures primarily due to the construction and furnishing of our new headquarters.

Cash Flows from Financing Activities

Generally, our financing activities consist primarily of public debt and equity offerings and cash receipts from the exercise of stock options. Net cash provided by financing activities was \$4.0 million in fiscal year 2019, as compared to \$573.0 million in fiscal year 2018. The decrease of \$569.0 million in net cash provided by financing activities was primarily because of the common stock and convertible debt offerings, and related purchase of capped call options, which occurred in March 2018 during fiscal year 2018.

Comparison of the Fiscal Years Ended July 31, 2018 and 2017

Refer to Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - "Liquidity and Capital Resources" located in our 10-K/A for the fiscal year ended July 31, 2018, filed on June 3, 2019, for the discussion of the comparison of fiscal year ended July 31, 2018 to the fiscal year ended July 31, 2017, the earliest of the three fiscal years presented in the consolidated financial statements.

Contractual Obligations

The following summarizes our contractual obligations as of July 31, 2019 (in thousands):

	Payments due by period				Total
	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years	
Long-term debt ⁽¹⁾	\$ 5,000	\$ 10,000	\$ 10,000	\$ 405,000	\$ 430,000
Operating lease obligations ⁽²⁾	10,707	30,021	26,518	74,508	141,754
Royalty obligations ⁽³⁾	2,018	1,619	560	—	4,197
Purchase commitments ⁽⁴⁾	27,149	10,443	227	—	37,819
Total	\$ 44,874	\$ 52,083	\$ 37,305	\$ 479,508	\$ 613,770

⁽¹⁾ Long-term debt consists of principal and interest payments on our Convertible Senior Notes. The \$400 million in principal will be due in March 2025.

⁽²⁾ Operating lease agreements primarily represent our obligations to make payments under our non-cancellable lease agreements for our corporate headquarters and worldwide offices through 2028.

⁽³⁾ Royalty obligations primarily represent our obligations under our non-cancellable agreements related to certain revenue-generating agreements.

⁽⁴⁾ Purchase commitments consist of agreements to purchase goods and services, entered into in the ordinary course of business. These represent commitments for which a penalty could be imposed if the agreement was canceled for any reason other than an event of default as described by the agreement.

Additionally, we have unrecognized tax benefits of \$11.6 million primarily associated with our U.S. Federal and California research and development tax credits as of July 31, 2019. We are unable to estimate when any cash settlement with a taxing authority might occur.

Off-Balance Sheet Arrangements

Through July 31, 2019, 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 7A. 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 July 31, 2019, and 2018. Our cash, cash equivalents, and investments as of July 31, 2019 and 2018 were \$1,337.8 million and \$1,258.1 million, respectively, and consisted primarily of cash, money market funds, corporate debt securities, U.S. government and agency securities, commercial paper, 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 \$6.2 million and \$4.5 million in the market value of our available-for-sale securities as of July 31, 2019 and 2018, 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, Euro, Japanese Yen, Malaysian Ringgit, and Polish Zloty. 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 in the location in which we provide our services. However, our contracts 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 fiscal year ended July 31, 2019, we recorded a net foreign currency loss of \$1.9 million as other expense in our consolidated statements of operations primarily due to currency exchange rate movement against the United States Dollar. For the fiscal year ended July 31, 2018, we recorded a foreign currency gain of \$0.5 million as other income in our consolidated statements of operations due to declines in strength of foreign currencies against the United States Dollar. We expect to 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 \$3.5 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 consist primarily of highly liquid investments purchased with a remaining maturity of two years or less. We do not use derivative financial instruments for speculative or trading purposes. However, this does not preclude our adoption of specific hedging strategies in the future.

Item 8. Financial Statements and Supplemental Data

**GUIDEWIRE SOFTWARE, INC. AND SUBSIDIARIES
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The supplementary financial information required by this Item 8 is included in Item 7 under the caption "Quarterly Results of Operations."

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Guidewire Software, Inc.:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of Guidewire Software, Inc. and subsidiaries (the Company) as of July 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three-year period ended July 31, 2019, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of July 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of July 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended July 31, 2019, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of July 31, 2019 based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company has changed its method of accounting for revenue from contracts with customers in the year ended July 31, 2019 due to the adoption of FASB Accounting Standards Update 2014-09, *Revenue from Contracts with Customers (Topic 606)*.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the (*consolidated*) financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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 company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit

preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgment. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Evaluation of revenue related to on-premise software arrangements with terms that are not standard

The Company recognized total revenue of \$719.5 million for the year ended July 31, 2019. As discussed in Notes 1 and 2 to the consolidated financial statements, revenue was derived principally from on-premise software licensing arrangements and may include implementation and other professional services. The Company's on-premise software licensing arrangements generally have a two-year initial term with a customer option to renew on an annual basis after the initial term. Consideration for on-premise software licenses is typically billed in advance on an annual basis over the license term.

We identified the evaluation of revenue from on-premise software licensing arrangements with terms and conditions that are not standard as a critical audit matter. Significant auditor judgment was required to evaluate the Company's assessment of the impact on revenue recognition of terms and conditions that are not standard. The evaluation included the Company's accounting for contract modifications, accounting for arrangements that include an extension of an existing license term, and the Company's determination of the amounts of revenue to be allocated to multiple promised goods or services in the contract.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's review of customer agreements, including controls over the identification and evaluation of on-premise software licensing arrangements with terms and conditions that are not standard. We tested certain on-premise software licensing arrangements by reading the underlying customer agreement and evaluating the Company's assessment of the contractual terms and conditions in accordance with revenue recognition requirements. Specifically, this included an evaluation of the Company's identification and assessment of terms and conditions that were not standard that could give rise to special accounting consideration. Additionally, we obtained external confirmation directly from certain of the Company's customers to assess that key terms and conditions relevant to the Company's revenue recognition were included in the Company's written customer agreement.

We have served as the Company's auditor since 2006.

Santa Clara, California
September 30, 2019

GUIDEWIRE SOFTWARE, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except for share data)

	July 31, 2019	July 31, 2018
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 254,101	\$ 437,140
Short-term investments	870,136	630,008
Accounts receivable, net of allowances of \$1,441 and \$1,062, respectively	138,443	124,849
Unbilled accounts receivable, net	36,728	—
Prepaid expenses and other current assets	35,566	30,464
Total current assets	1,334,974	1,222,461
Long-term investments	213,524	190,952
Unbilled accounts receivable, net	9,375	—
Property and equipment, net	65,809	18,595
Intangible assets, net	66,542	95,654
Goodwill	340,877	340,877
Deferred tax assets, net	90,308	90,369
Other assets	\$ 45,554	22,525
TOTAL ASSETS	\$ 2,166,963	\$ 1,981,433
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	\$ 34,255	\$ 30,635
Accrued employee compensation	73,365	60,135
Deferred revenue, net	108,304	127,107
Other current liabilities	16,348	20,280
Total current liabilities	232,272	238,157
Convertible senior notes, net	317,322	305,128
Deferred revenue, net	23,527	23,758
Other liabilities	19,641	774
Total liabilities	592,762	567,817
Commitments and contingencies (Note 7)		
STOCKHOLDERS' EQUITY:		
Common stock, par value \$0.0001 per share—500,000,000 shares authorized as of July 31, 2019 and 2018; 82,140,883 and 80,611,698 shares issued and outstanding as of July 31, 2019 and 2018, respectively	8	8
Additional paid-in capital	1,391,904	1,296,380
Accumulated other comprehensive loss	\$ (7,758)	\$ (7,748)
Retained earnings	190,047	124,976
Total stockholders' equity	1,574,201	1,413,616
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	2,166,963	1,981,433

See accompanying Notes to Consolidated Financial Statements.

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

	Fiscal years ended July 31,		
	2019	2018	2017
Revenue:			
License and subscription	\$ 385,322	\$ 309,007	\$ 266,711
Maintenance	85,424	77,337	68,643
Services	248,768	266,505	174,179
Total revenue	719,514	652,849	509,533
Cost of revenue:			
License and subscription	64,798	35,452	17,046
Maintenance	16,499	14,783	13,397
Services	243,053	246,548	161,116
Total cost of revenue	324,350	296,783	191,559
Gross profit:			
License and subscription	320,524	273,555	249,665
Maintenance	68,925	62,554	55,246
Services	5,715	19,957	13,063
Total gross profit	395,164	356,066	317,974
Operating expenses:			
Research and development	188,541	171,657	130,323
Sales and marketing	130,751	124,117	109,239
General and administrative	74,401	75,916	56,551
Total operating expenses	393,693	371,690	296,113
Income (loss) from operations	1,471	(15,624)	21,861
Interest income	30,182	13,281	5,867
Interest expense	(17,334)	(6,442)	(13)
Other income (expense), net	(1,867)	509	811
Income (loss) before provision for income taxes	12,452	(8,276)	28,526
Provision for (benefit from) income taxes	(8,280)	18,467	10,454
Net income (loss)	\$ 20,732	\$ (26,743)	\$ 18,072
Net income (loss) per share:			
Basic	\$ 0.25	\$ (0.34)	\$ 0.24
Diluted	\$ 0.25	\$ (0.34)	\$ 0.24
Shares used in computing net income (loss) per share:			
Basic	81,447,998	77,709,592	73,994,577
Diluted	82,681,214	77,709,592	75,328,343

See accompanying Notes to Consolidated Financial Statements.

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

	As of July 31,		
	2019	2018	2017
Net income (loss)	\$ 20,732	\$ (26,743)	\$ 18,072
Other comprehensive income (loss):			
Foreign currency translation adjustments	(1,841)	(1,567)	1,179
Unrealized gains (losses) on available-for-sale securities	2,956	(596)	(465)
Tax benefit (expense) on unrealized gains (losses) on available-for-sale securities	(573)	233	234
Reclassification adjustment for realized gains (losses) included in net income (loss)	(552)	(22)	(151)
Total other comprehensive income (loss)	(10)	(1,952)	797
Comprehensive income (loss)	\$ 20,722	\$ (28,695)	\$ 18,869

See accompanying Notes to Consolidated Financial Statements.

GUIDEWIRE SOFTWARE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except for share data)

	Common stock		Additional paid-in capital	Accumulated other comprehensive income (loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount				
Balance as of July 31, 2016	73,039,919	\$ 7	\$ 742,690	\$ (6,593)	\$ 47,831	\$ 783,935
Net income	—	—	—	—	18,072	18,072
Stock-based compensation	—	—	72,695	—	—	72,695
Issuance of common stock upon exercise of stock options	594,936	—	5,563	—	—	5,563
Issuance of common stock upon restricted stock units ("RSU") release	1,372,770	1	(1)	—	—	—
Foreign currency translation adjustment	—	—	—	1,179	—	1,179
Unrealized loss on available-for-sale securities, net of tax	—	—	—	(231)	—	(231)
Reclassification adjustment for realized gain on available-for-sale securities, included in net income	—	—	—	(151)	—	(151)
Tax benefit from the exercise of stock options and vesting of RSUs	—	—	7,468	—	—	7,468
Balance as of July 31, 2017	75,007,625	\$ 8	\$ 828,415	\$ (5,796)	\$ 65,903	\$ 888,530
Net loss	—	—	—	—	(26,743)	(26,743)
Stock-based compensation	—	—	89,176	—	—	89,176
Issuance of common stock upon exercise of stock options	150,924	—	2,013	—	—	2,013
Issuance of common stock upon RSU release	1,255,605	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	(1,567)	—	(1,567)
Unrealized loss on available-for-sale securities, net of tax	—	—	—	(363)	—	(363)
Reclassification adjustment for realized gain on available-for-sale securities, included in net income	—	—	—	(22)	—	(22)
Issuance of common stock for Cyence acquisition	1,568,973	—	117,457	—	—	117,457
Public offering, net of issuance cost	2,628,571	—	220,948	—	—	220,948
Equity component of convertible senior notes, net of issuance cost	—	—	74,562	—	—	74,562
Purchase of capped calls	—	—	(37,200)	—	—	(37,200)
Adoption of new accounting standard (ASU 2016-09)	—	—	1,009	—	85,816	86,825
Balance as of July 31, 2018	80,611,698	\$ 8	\$ 1,296,380	\$ (7,748)	\$ 124,976	\$ 1,413,616
Net income	—	—	—	—	20,732	20,732
Stock-based compensation	—	—	91,570	—	—	91,570
Issuance of common stock upon exercise of stock options	301,901	—	3,954	—	—	3,954
Issuance of common stock upon RSU release	1,276,252	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	(1,841)	—	(1,841)
Unrealized gain on available-for-sale securities, net of tax	—	—	—	2,383	—	2,383
Reclassification adjustment for realized gain on available-for-sale securities, included in net income	—	—	—	(552)	—	(552)
Cancellation of Common Stock for Cyence acquisition	(48,968)	—	—	—	—	—
Adoption of new accounting standard (Topic 606)	—	—	—	—	44,339	44,339
Balance as of July 31, 2019	82,140,883	\$ 8	\$ 1,391,904	\$ (7,758)	\$ 190,047	\$ 1,574,201

See accompanying Notes to Consolidated Financial Statements.

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

	Fiscal years ended July 31,		
	2019	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income (loss)	\$ 20,732	\$ (26,743)	\$ 18,072
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	39,953	35,611	18,725
Amortization of debt discount and issuance costs	12,194	4,512	—
Stock-based compensation	91,516	89,614	71,794
Excess tax benefit from stock-based compensation	—	—	(7,468)
Charges to bad debt and revenue reserves	670	1,062	—
Deferred income tax	(13,998)	14,150	(1,227)
Amortization of premium (accretion of discount) on available-for-sale securities, and other non-cash items	(7,568)	(1,418)	1,462
Changes in operating assets and liabilities:			
Accounts receivable	(15,057)	(40,832)	(9,750)
Unbilled accounts receivable	(17,341)	—	—
Prepaid expenses and other assets	(16,251)	(2,737)	(9,463)
Accounts payable	(5,521)	16,794	1,311
Accrued employee compensation	13,825	9,230	7,138
Deferred revenue, net	(9,628)	32,358	41,553
Other liabilities	22,600	8,858	6,612
Net cash provided by operating activities	116,126	140,459	138,759
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchases of available-for-sale securities	(1,209,312)	(859,657)	(462,035)
Sales and maturities of available-for-sale securities	956,736	464,143	547,630
Purchases of property and equipment	(44,921)	(9,398)	(5,886)
Capitalized software development costs	(3,936)	(2,613)	(784)
Acquisitions of business, net of acquired cash	—	(130,059)	(187,590)
Strategic investment	—	—	(4,677)
Net cash used in investing activities	(301,433)	(537,584)	(113,342)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from issuance of convertible senior notes, net of issuance costs	—	387,239	—
Proceeds from issuance of common stock, net of issuance costs	—	220,948	—
Purchase of capped calls	—	(37,200)	—
Proceeds from issuance of common stock upon exercise of stock options	3,954	2,013	5,563
Excess tax benefit from exercise of stock options and vesting of restricted stock units	—	—	7,468
Net cash provided by financing activities	3,954	573,000	13,031
Effect of foreign exchange rate changes on cash and cash equivalents	(1,686)	(1,911)	1,146
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(183,039)	173,964	39,594
CASH AND CASH EQUIVALENTS—Beginning of period	437,140	263,176	223,582
CASH AND CASH EQUIVALENTS—End of period	<u>\$ 254,101</u>	<u>\$ 437,140</u>	<u>\$ 263,176</u>
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:			
Cash paid for interest	\$ 5,036	\$ —	\$ —
Cash paid for income taxes, net of tax refunds	\$ 4,557	\$ 4,744	\$ 3,700
Accruals for purchases of property and equipment	10,763	\$ 1,508	\$ 1,376
Accruals for capitalized software development costs	298	\$ 189	\$ 171

See accompanying Notes to Consolidated Financial Statements.

GUIDEWIRE SOFTWARE, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. The Company and Summary of Significant Accounting Policies

Company

Guidewire Software, Inc., a Delaware corporation, was incorporated on September 20, 2001. Guidewire Software, Inc., together with its subsidiaries (the “Company”), provides a technology platform which consists of three key elements: core transaction processing, data management and analytics, and digital engagement. The Company’s technology platform supports core insurance operations, including underwriting and policy administration, claim management and billing; insights into data that can improve business decision making; and digital sales, service and claims experiences for policyholders, agents, and other key stakeholders. The Company’s customers are primarily property and casualty insurance carriers.

Public Offerings

In March 2018, the Company completed a public offering of 2,628,571 shares of its common stock, including the sale of shares in connection with the underwriters’ exercise in full of their option to purchase additional shares of common stock from the Company. The public offering price of the shares sold in the offering was \$87.50 per share. No shares were sold by the Company’s stockholders in this public offering. Concurrently, the Company completed a sale of \$400.0 million aggregate principal amount of 1.25% Convertible Senior Notes due 2025 (the “Convertible Senior Notes”), including amounts sold in connection with the underwriters’ exercise in full of their option to purchase additional Convertible Senior Notes. Net of offering expenses and underwriting discounts (“issuance costs”), the Company received net proceeds of approximately \$220.9 million related to the common stock offering and \$387.2 million related to the convertible note offering.

Basis of Presentation and Consolidation

The Company’s consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America (“GAAP”). The consolidated financial statements and 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 periods presented. All intercompany balances and transactions have been eliminated in consolidation.

Restatement of Annual Consolidated Financial Statements

On June 3, 2019, the Company filed Amendment No. 1 to its Annual Report on Form 10-K (the “2018 Form 10-K/A”) for the fiscal year ended July 31, 2018. The Company filed the 2018 Form 10-K/A to reflect restatements of its audited consolidated financial statements as of and for the fiscal years ended July 31, 2018 and 2017. Specifically, the 2018 Form 10-K/A reflected restatements of the Company’s Consolidated Balance Sheets at July 31, 2018 and 2017, and its Consolidated Statements of Operations, Comprehensive Income (Loss), Stockholders’ Equity and Cash Flows for the fiscal years ended July 31, 2018 and 2017, and the related notes thereto, as a result of the correction of errors primarily related to a misapplication of the vendor specific objective evidence (“VSOE”) provisions of the prior revenue recognition guidance applicable to certain customer contracts under Accounting Standards Codification (“ASC”) 605 (the “VSOE error”).

The Company also corrected the previously filed consolidated financial statements for the year ended July 31, 2018 for errors related to professional services arrangements (the “other corrections”) that were deemed immaterial when they were originally identified. Additionally, the Company corrected the provision for income taxes to reflect the impact of the VSOE error and other corrections (together with the tax correction, the “adjustments” or the “restatement”). Accordingly, amounts in certain prior period disclosures reflect the amounts as filed in the 2018 Form 10-K/A.

Use of Estimates

The preparation of the accompanying 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, valuation allowance for deferred tax assets, stock-based compensation, annual bonus attainment, income tax uncertainties, fair value of convertible senior notes and investments, valuation of goodwill and intangible assets, fair value of acquired assets and assumed liabilities, 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) as a separate component of stockholders' equity in the accompanying 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 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 have been classified as available-for-sale in the periods presented.

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).

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 on-premise software development costs incurred subsequent to the establishment of technological feasibility are subject to capitalization and amortized 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 on-premise software have been charged to research and development expense in the accompanying consolidated statements of operations as incurred.

For qualifying costs incurred for computer software developed for internal use, the Company begins to capitalize costs when preliminary development efforts are successfully completed, management has authorized and committed project funding, and it is probable that the project will be completed. 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 expenses 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 on the Company's consolidated statements of operations. Capitalized software development costs are recorded in property and equipment on the Company's consolidated balance sheets.

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

The Company evaluates its long-lived assets, consisting of property and equipment 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 or 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 to the Company's 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, and 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 on the consolidated balance sheets are in excess of amounts that are insured by the Federal Deposit Insurance Corporation ("FDIC").

No customer individually accounted for 10% or more of the Company's revenue for the years ended July 31, 2019, 2018 and 2017. As of July 31, 2019 and 2018, no customer accounted for 10% or more of the Company's total accounts receivable.

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 that can span multiple years, and implementation and other professional services arrangements. The Company accounts for revenue in accordance with ASC 606, which the Company adopted on August 1, 2018 using the modified retrospective method. Refer to Note 1 to the consolidated financial statements included in the Company's Annual Report on Form 10-K/A for the fiscal year ended July 31, 2018 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.

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:

- i. 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
- ii. distinct in the context of the contract, whereby the transfer of the services or products 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:

- i. On-premise software licenses related to term or perpetual agreements;
- ii. 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;
- iii. Subscription services related to the Company's Software-as-a-Service ("SaaS") offerings, including hosting; and
- iv. Services related to the implementation and configuration of the Company's software, reimbursable travel, and training.

Term licenses generally have a two-year initial term with a customer option to renew on an annual basis after the initial term. 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. 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.

On-premise 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 aggregate value of the stand alone selling prices 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, cloud transition arrangements generally provide for the customer to continue using its term license while the subscription services are being implemented which requires an allocation between the term license and the subscription services. 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

On-premise software licenses

On-premise 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 on-premise software licenses are made available to a customer. Consideration for on-premise 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 on-premise 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 on-premise 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 an on-premise 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 on-premise 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.

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, and mainly consist of sales commissions paid to sales personnel and their related payroll taxes. 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 consolidated statement of operations.

Costs to fulfill a contract, or fulfillment costs, mainly consist of royalties payable to third-party software providers that support both the Company's software offerings and support services. 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.

Warranties

The Company generally provides a warranty for its software products and services to its customers for periods ranging from three to twelve months. The Company's software products are generally warranted to be free of defects in materials and workmanship under normal use and to substantially perform as described in published documentation. The Company's services are generally warranted to be performed in a professional manner and to materially conform to the specifications set forth in the related customer contract. In the event there is a failure of such warranties, the Company generally will correct the problem or provide a reasonable workaround or replacement product. If the Company cannot correct the problem or provide a workaround or replacement product, then the customer's remedy is generally limited to refund of the fees paid for the nonconforming product or services. Warranty expense has been insignificant to date.

Advertising Costs

Advertising costs are expensed as incurred and amounts incurred were not material during the years ended July 31, 2019, 2018 and 2017.

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.

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 estimates of the achievement of the performance conditions. All TSR PSUs will vest at the end of a three-year period from initial grant.

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 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, 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 consolidated statement of operations.

Recently Adopted Accounting Pronouncements

Revenue from Contracts with Customers (Topic 606): Revenue Recognition

In May 2014, the Financial Accounting Standards Board ("FASB") issued ASC 606, which supersedes the revenue recognition requirements in Accounting Standards Codification Topic 605, "Revenue Recognition" ("ASC 605") as well as other industry-specific guidance. The core principle of ASC 606 is that an entity should recognize revenue when control of the promised goods or services is transferred to customers at an amount that reflects the consideration to which the Company expects to be entitled to in exchange for those goods or services.

The Company adopted ASC 606 as of August 1, 2018 using the modified retrospective transition method and applied ASC 606 to those contracts that were not completed, as defined under ASC 606, as of August 1, 2018. The results for reporting periods beginning after August 1, 2018 are presented under ASC 606, while prior period amounts are not adjusted and continue to be presented under ASC 605. The main difference in reporting between ASC 605 and ASC 606 is that under ASC 606, the Company recognizes the revenue associated with term licenses not when payments are made or due, but when control of the software license is transferred to the customer, which occurs at or near the time a contract with a customer is executed, whereas under ASC 605, revenue associated with term software licenses was recognized over time in the earlier of the period in which the payments are due or are actually made because of extended payment terms. As a result, under ASC 606, all contractually obligated payments under a term license that the Company reasonably expects to collect would be recognized upon the transfer of control of the on-premise software licenses, which is generally when made available to a customer. Under ASC 606, costs to obtain a contract and costs to fulfill a contract are capitalized as an asset and amortized on a basis that is consistent with the pattern of transfer of performance obligations with which the asset relates. In contrast, under ASC 605, costs to obtain and costs to fulfill a contract were historically expensed as incurred.

The Company recorded a net increase to opening 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. The cumulative impact results from the differences between

applying ASC 606 as opposed to applying ASC 605 to existing contracts that were not yet completed as of the date of initial adoption. For contracts completed before August 1, 2018, the Company has not retrospectively applied ASC 606 to the contracts.

Under ASC 606, contracts with customers are reflected in the 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 as part of current assets on the consolidated balance sheets.
- Unbilled accounts receivable, net represents revenue recognized prior to the end of the reporting period for performance on a portion of the contract in advance of both billing the customer and receiving consideration. Under ASC 606, this balance represents our contract assets.
- Contract costs include deferred commissions and their related payroll taxes, royalties, and referral fees. The short-term portion is presented as prepaid and other current assets, and 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, and the long-term portion is presented as other assets.
- Deferred revenue, net represents amounts received as consideration from the Company's customers in advance of performance on a portion of the contract as of the end of the reporting period. Under ASC 606, this balance represents our 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, on the consolidated balance sheets. As of July 31, 2019, there was no allowance for doubtful accounts associated with unbilled accounts receivable.

The following table summarizes the impact to the financial statement line items within the consolidated balance sheets as a result of the initial adoption of ASC 606 (in thousands):

	Balances reported as of July 31, 2018	Cumulative effect adjustment due to adoption of ASC 606	Adjusted beginning balance as of August 1, 2018
Unbilled accounts receivable, net	\$ —	\$ 28,762	\$ 28,762
Contract costs, net	—	12,932	12,932
Deferred tax asset, net	90,369	(13,351)	77,018
Prepaid expenses and other assets	52,989	(239)	52,750
Other liabilities	(21,054)	7,055	(13,999)
Deferred revenue, net	(150,865)	9,180	(141,685)
Retained earnings	(124,976)	(44,339)	(169,315)

The cumulative effect adjustment on unbilled accounts receivable is driven by revenue that is recognized in advance of billings under ASC 606. The Company's on-premise software license arrangements result in revenue being recognized at the point in which the software license is transferred to customers, while agreed-upon contractual terms generally provide for billings to occur over a stated licensing period.

The cumulative effect adjustment on contract costs is driven by the requirement in ASC 606 to capitalize incremental, direct costs of either obtaining or fulfilling a contract. In prior periods, these costs were expensed as incurred under ASC 605.

The cumulative effect adjustment on deferred revenue is primarily driven by the requirement under ASC 606 to recognize license revenue upfront rather than over the contract period as described in the paragraph above related to unbilled accounts receivable.

The following table summarizes the financial statement line items within the consolidated balance sheets as of July 31, 2019 that were impacted as a result of the adoption of ASC 606 (in thousands):

	As Reported	Change	As if presented under ASC 605
Accounts receivable, net	\$ 138,443	\$ 2,663	\$ 141,106
Unbilled accounts receivable, net	46,103	(46,103)	—
Contract costs, net ⁽¹⁾	30,390	(30,390)	—
Deferred tax asset, net	90,308	51,987	142,295
Prepaid expenses and other assets	50,730	(503)	50,227
Other liabilities	(35,989)	1,605	(34,384)
Deferred revenue, net	(131,831)	(156,376)	(288,207)
Retained earnings	(190,047)	177,575	(12,472)

⁽¹⁾ The short- and long-term portions of this balance are reported in 'Prepaid expenses and other current assets' and 'Other assets,' respectively, on the consolidated balance sheets.

The difference between the 'As Reported' amounts and the 'As if presented under ASC 605' amounts within the consolidated balance sheets is due to the same considerations described above with respect to the transition adjustments as a result of the adoption of ASC 606.

The following table summarizes the financial statement line items within the consolidated statement of operations that were impacted as a result of the adoption of ASC 606 for the year ended July 31, 2019 (in thousands):

	As Reported	Change	As if presented under ASC 605
Revenue:			
License and subscription	\$ 385,322	\$ (169,980)	\$ 215,342
Maintenance	85,424	1,505	86,929
Services	248,768	5,769	254,537
Total revenue	719,514	(162,706)	556,808
Total cost of revenue	324,350	(7,494)	316,856
Gross profit	395,164	(155,212)	239,952
Total operating expenses	393,693	17,547	411,240
Income (loss) from operations	1,471	(172,759)	(171,288)
Other income (expense), net	10,981	352	11,333
Benefit from income taxes	(8,280)	(39,170)	(47,450)
Net income (loss)	\$ 20,732	\$ (133,237)	\$ (112,505)
Diluted net income (loss) per share	\$ 0.25	\$ (1.63)	\$ (1.38)

The difference between the 'As Reported' amounts and the 'As if presented under ASC 605' amounts within revenue is primarily due to term license fees for the entire committed term being recognized upfront as reported under ASC 606 rather than on a due and payable basis or ratably under ASC 605 and subscription arrangements with escalating annual fees that are recognized ratably over the committed term under ASC 606, rather than as escalating fees in each year under ASC 605, partially offset by the difference in revenue recognized associated with a fixed fee contract. Also, hosting fees associated with our subscriptions are classified as subscription revenue under ASC 606 instead of services revenue under ASC 605.

The impact to the consolidated statements of cash flows for the year ended July 31, 2019 as a result of adopting ASC 606 was not significant.

Financial Instruments (Topic 825): Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments (Topic 825) ("ASU 2016-01"), which impacts certain aspects of recognition, measurement, and presentation and disclosure of financial instruments. Under ASU 2016-01, unconsolidated non-equity method investments shall be measured at fair value. If such investments do not have a readily determinable fair value, an election may be made to measure them at cost after considering observable price changes for similar

instruments. The Company adopted this standard beginning August 1, 2018, using the measurement alternative election, and the adoption did not result in a significant impact.

Recent Accounting Pronouncements Not Yet Adopted

Leases (ASC 842): Accounting for Leases

In February 2016, the FASB issued 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”), which requires lessees to put most leases on their balance sheets but recognize the expenses on their income statements in a manner similar to current practice. ASC 842 states that a lessee would recognize a lease liability for the obligation to make lease payments and a right-to-use asset for the right to use the underlying asset for the lease term. The standard will be effective and the Company will adopt it beginning August 1, 2019. The Company will adopt the new standard on a modified retrospective basis and will not restate comparative periods. The Company will elect the package of practical expedients permitted under the transition guidance, which allows the Company to carryforward its historical lease classification, its assessment on whether a contract is or contains a lease, and its initial direct costs for any leases that exist prior to adoption of the new standard. The Company will also elect to combine lease and non-lease components and to keep leases with an initial term of twelve months or less off the balance sheet and recognize the associated lease payments in the consolidated statements of income on a straight-line basis over the lease term. The Company estimates approximately \$90 million and \$115 million will be recognized as total right-of-use assets and total lease liabilities, respectively, on the consolidated balance sheet as of August 1, 2019, and to write-off its deferred rent balance as of July 31, 2019 of approximately \$20 million. Other than as disclosed, the Company does not expect the new standard to have a material impact on its consolidated financial statements.

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

In February 2018, the FASB issued ASU No. 2018-02, Income Statement, Reporting Comprehensive Income (Topic 220): Reclassification of Certain Effects from Accumulated Other Comprehensive Income (“ASU 2018-02”), which allows a reclassification of stranded tax effects from accumulated other comprehensive income to retained earnings, as a result of the Tax Act. The standard will be effective and the Company will adopt it beginning August 1, 2019. The Company has evaluated the impact of adopting the new standard and does not expect the impact to accumulated other comprehensive income and retained earnings to be significant.

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 by customers in cloud computing arrangements to be deferred and recognized over the term of the arrangement, if those costs would be capitalized by the customer 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 will evaluate 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 for the fiscal year ended July 31, 2019 by revenue type and by geography is as follows (in thousands):

	License and subscription	Maintenance	Services	Total
United States	\$ 225,985	\$ 53,877	\$ 166,724	\$ 446,586
Canada	28,658	8,842	9,469	46,969
Other Americas	6,576	4,450	7,092	18,118
Total Americas	261,219	67,169	183,285	511,673
United Kingdom	23,901	4,591	11,504	39,996
Other EMEA	52,121	7,116	37,153	96,390
Total EMEA	76,022	11,707	48,657	136,386
Total APAC	48,081	6,548	16,826	71,455
Total revenue	385,322	85,424	248,768	719,514

Revenue for the fiscal year ended July 31, 2019 by major product or service type is as follows (in thousands):

License and subscription	
Term license	\$ 318,142
Subscription	65,050
Perpetual license	2,130
Maintenance	85,424
Services	248,768
Total revenue	\$ 719,514

Customer Contract - Related Balance Sheet Amounts

The Company generally invoices customers in annual installments payable in advance. The difference between the timing of revenue recognition and the timing of billings results in the recognition of unbilled accounts receivable or deferred revenue in the consolidated balance sheets. Amounts related to customer contract-related arrangements are included on the consolidated balance sheets as of August 1, 2018 and July 31, 2019 as follows (in thousands):

	Beginning balance as of August 1, 2018 as adjusted	Ending balance as of July 31, 2019 as reported
Unbilled accounts receivable, net	\$ 28,762	\$ 46,103
Contract costs, net ⁽¹⁾	12,932	30,390
Deferred revenue, net	(141,685)	(131,831)

⁽¹⁾ The short- and long-term portions of this balance are reported in 'Prepaid expenses and other current assets' and 'Other assets,' respectively, on the consolidated balance sheets.

Unbilled accounts receivable

Unbilled accounts receivable includes those 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 time-based software licenses to customers up-front, but invoices customers annually over the term of the license, which is typically two years. During the fiscal year ended July 31, 2019, the Company transferred control of a ten year time-based license that resulted in \$9.7 million of unbilled accounts receivable as of July 31, 2019, representing future billings in years two through ten of the license term.

Unbilled accounts receivable is classified as either current or non-current based on the duration of remaining time between the date of the consolidated balance sheets and the anticipated due date of the underlying receivables.

Contract costs

Contract costs consist of customer acquisition costs and costs to fulfill a contract, which includes commissions and their related payroll taxes, royalties, and referral fees. Contract costs are classified as either current or non-current based on the duration of time remaining between the date of the consolidated balance sheets and the anticipated amortization date of the associated costs. The current portion of contract costs as of July 31, 2019 in the amount of \$7.0 million is included in prepaid and other current assets on the Company's consolidated balance sheets. The non-current portion of contract costs as of July 31, 2019 in the amount of \$23.4 million is included in other assets on the Company's consolidated balance sheets. The Company amortized \$5.5 million of contract costs during the fiscal year ended July 31, 2019.

Deferred revenue

Deferred revenue consists of 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 goods or services have not been transferred. Deferred revenue that will be realized during the 12-month period following the date of the consolidated balance sheets is recorded as current, and the remaining deferred revenue is recorded as non-current. During the fiscal year ended July 31, 2019, the Company recognized revenue of \$112.2 million related to the Company's deferred revenue balance as of August 1, 2018.

Performance Obligations

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 applied the practical expedient in accordance with ASC 606 to exclude amounts related to professional services contracts that are on a time and materials basis. The aggregate amount of consideration allocated to performance obligations either not satisfied or partially satisfied was \$410.3 million as of July 31, 2019. 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.

3. Fair Value of Financial Instruments

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

	July 31, 2019			Estimated Fair Value
	Amortized Cost	Unrealized Gains	Unrealized Losses	
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

	July 31, 2018			Estimated Fair Value
	Amortized Cost	Unrealized Gains	Unrealized Losses	
U.S. Government agency securities	\$ 9,000	\$ —	\$ (27)	\$ 8,973
Commercial paper	471,966	4	(141)	471,829
Corporate bonds	441,540	76	(764)	440,852
U.S. Government bonds	89,986	—	(55)	89,931
Certificates of deposit	81,985	53	(8)	82,030
Money market funds	90,766	—	—	90,766
Total	\$ 1,185,243	\$ 133	\$ (995)	\$ 1,184,381

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):

	July 31, 2019					
	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	\$ 40,707	\$ (29)	\$ —	\$ —	\$ 40,707	\$ (29)
Corporate bonds	122,337	(105)	9,345	(6)	131,682	(111)
U.S. Government bonds	53,876	(29)	—	—	53,876	(29)
Total	\$ 216,920	\$ (163)	\$ 9,345	\$ (6)	\$ 226,265	\$ (169)

As of July 31, 2019, the Company had 68 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 neither intends 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 July 31, 2019 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 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):

	July 31, 2019		
	Less Than 12 Months	12 to 36 Months	Total
U.S. Government agency securities	\$ 39,166	\$ 16,713	\$ 55,879
Commercial paper	239,333	—	239,333
Corporate bonds	481,568	186,020	667,588
U.S. Government bonds	123,600	6,995	130,595
Certificates of deposit	47,000	3,796	50,796
Money market funds	115,711	—	115,711
Total	\$ 1,046,378	\$ 213,524	\$ 1,259,902

Fair Value Measurement

Fair value is defined as the exchange price that would be received for an asset or an exit price paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs.

The Company applies the three-level valuation hierarchy when measuring certain assets and liabilities:

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. The Company did not have any Level 3 financial assets or liabilities as of July 31, 2019 or 2018.

The categorization of a financial instrument within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The carrying value of the Company's accounts receivable, accounts payable and accrued liabilities approximates their fair value due to the short-term nature of these instruments.

Available-for-sale investments

The following tables summarize the Company's available-for-sale investments measured at fair value on a recurring basis, by level within the fair value hierarchy:

	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 investments	—	213,524	—	213,524
Total	\$ 115,712	\$ 1,144,190	\$ —	\$ 1,259,902

	July 31, 2018			
	Level 1	Level 2	Level 3	Total
Cash and cash equivalents:				
Commercial paper	\$ —	\$ 269,654	\$ —	\$ 269,654
Corporate bonds	—	3,001	—	3,001
Money market funds	90,766	—	—	90,766
Total cash equivalents	90,766	272,655	—	\$ 363,421
Short-term investments:				
U.S. Government agency securities	—	1,999	—	1,999
Commercial paper	—	195,376	—	195,376
Corporate bonds	—	281,696	—	281,696
U. S. Government bonds	—	89,931	—	89,931
Certificates of deposit	—	61,006	—	61,006
Total short-term investments	—	630,008	—	630,008
Long-term investments:				
U.S. Government agency securities	—	6,974	—	6,974
Commercial paper	—	6,799	—	6,799
Corporate bonds	—	151,291	—	151,291
U.S. Government bonds	—	4,864	—	4,864
Certificates of deposit	—	21,024	—	21,024
Total long-term investments	—	190,952	—	190,952
Total	\$ 90,766	\$ 1,093,615	\$ —	\$ 1,184,381

Convertible Senior Notes

The fair value of the Convertible Senior Notes was \$454.1 million and \$398.7 million at July 31, 2019 and 2018, respectively. 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 debt discount and issuance costs on its consolidated balance sheets. For further information on the Convertible Senior Notes, see Note 6.

4. Balance Sheet Components

Prepaid Expenses and Other Current Assets

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

	July 31, 2019	July 31, 2018
Prepaid expenses	\$ 11,926	\$ 14,704
Contract costs	7,015	—
Deferred costs	7,030	9,074
Deposits and other receivables	9,595	6,686
Prepaid expenses and other current assets	<u>\$ 35,566</u>	<u>\$ 30,464</u>

Property and Equipment, net

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

	July 31, 2019	July 31, 2018
Computer hardware	\$ 17,799	\$ 20,614
Software	6,741	4,664
Capitalized software development costs	7,374	3,978
Equipment and machinery	10,455	4,265
Furniture and fixtures	8,137	4,217
Leasehold improvements	48,191	10,751
Total property and equipment	<u>98,697</u>	<u>48,489</u>
Less accumulated depreciation	<u>(32,888)</u>	<u>(29,894)</u>
Property and equipment, net	<u>\$ 65,809</u>	<u>\$ 18,595</u>

As of July 31, 2019 and 2018, no property and equipment was pledged as collateral. Depreciation expense, excluding the amortization of software development costs, was \$9.7 million, \$7.7 million, and \$6.6 million for the fiscal years ended July 31, 2019, 2018, and 2017, 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 over the estimated lives of the applications, ranging from three to five years. The Company recognized approximately \$1.0 million and \$0.4 million in amortization expense in cost of revenue - license and subscription on the accompanying consolidated statements of operations during the fiscal years ended July 31, 2019 and 2018, respectively. There was no such amortization during the fiscal year ended July 31, 2017.

Other Assets

Other assets consist of the following (in thousands):

	July 31, 2019	July 31, 2018
Prepaid expenses	\$ 2,640	\$ 2,476
Contract costs	23,375	—
Deferred costs	8,867	9,377
Strategic investments	10,672	10,672
Other assets	<u>\$ 45,554</u>	<u>\$ 22,525</u>

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 price changes. During the years ended July 31, 2019 and 2018, there were no changes in the investment's carrying value of \$10.7 million.

Goodwill and Intangible Assets

Changes in the carrying amount of goodwill for the periods presented are as follows (in thousands):

Goodwill - July 31, 2017	\$	141,851
Cyence Acquisition		198,929
Changes in carrying value		97
Goodwill - July 31, 2018	\$	340,877
Changes in carrying value		—
Goodwill - July 31, 2019	\$	340,877

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

	Remaining Weighted-Average Useful Life (in years)	July 31, 2019			July 31, 2018		
		Cost	Accumulated Amortization	Net Book Value	Cost	Accumulated Amortization	Net Book Value
Acquired technology	2.4	\$ 93,600	\$ 53,970	39,630	\$ 93,600	\$ 34,189	\$ 59,411
Customer contracts and related relationships	4.6	35,700	12,566	23,134	35,700	6,633	29,067
Partner relationships	5.7	200	74	126	200	52	148
Trademarks	5.3	2,500	625	1,875	2,500	268	2,232
Order backlog	1.3	8,700	6,923	1,777	8,700	3,904	4,796
Total	3.2	\$ 140,700	\$ 74,158	\$ 66,542	\$ 140,700	\$ 45,046	\$ 95,654

Amortization expense was \$29.1 million, \$27.5 million, and \$12.1 million during the years ended July 31, 2019, 2018, and 2017, respectively. The future amortization expense for existing intangible assets as of July 31, 2019, based on their current useful lives, is as follows (in thousands):

Fiscal year ending July 31,	
2020	\$ 26,835
2021	19,965
2022	11,143
2023	3,799
2024	2,379
Thereafter	2,421
Total future amortization expense	\$ 66,542

Accounts Receivables

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

	July 31, 2019	July 31, 2018
Accounts receivable	\$ 139,884	\$ 125,911
Allowance for doubtful accounts and revenue reserves	(1,441)	(1,062)
Accounts receivable, net	\$ 138,443	\$ 124,849

Allowance for Doubtful Accounts and Revenue Reserves

Allowance for doubtful accounts and revenue reserves consists of the following (in thousands):

Allowances - July 31, 2017	\$	—
Charges to bad debt and revenue reserves		1,062
Write-offs, net		—
Allowances - July 31, 2018	\$	1,062
Charges to bad debt and revenue reserves		670
Write-offs, net		(291)
Allowances - July 31, 2019		1,441

Accrued Employee Compensation

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

	July 31, 2019	July 31, 2018
Bonus	\$ 37,628	\$ 31,273
Commission	10,317	7,287
Vacation	14,511	13,132
Salaries, payroll taxes and benefits	10,909	8,443
Total	\$ 73,365	\$ 60,135

5. Net Income (Loss) per Share

The Company calculates basic earnings per share by dividing the net income (loss) by the weighted average number of shares of common stock outstanding for the period. The diluted earnings per share is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period using the treasury stock method. For purposes of this calculation, options to purchase common stock, stock awards, and the Convertible Senior Notes are considered to be common stock equivalents.

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 diluted net income per share, if applicable. The conversion spread will have a dilutive impact on net income (loss) per share of common stock 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 fiscal years ended July 31, 2019 and 2018, the Company's weighted average common stock price was below the conversion price of the Convertible Senior Notes.

The following table sets forth the computation of the Company's basic and diluted net income per share for the years ended July 31, 2019, 2018 and 2017 (in thousands, except share and per share amounts):

	Fiscal years ended July 31,		
	2019	2018	2017
Numerator:			
Net income (loss)	\$ 20,732	\$ (26,743)	\$ 18,072
Net income (loss) per share:			
Basic	\$ 0.25	\$ (0.34)	\$ 0.24
Diluted	\$ 0.25	\$ (0.34)	\$ 0.24
Denominator:			
Weighted average shares used in computing net income (loss) per share:			
Basic	81,447,998	77,709,592	73,994,577
Weighted average effect of diluted stock options	229,035	—	544,520
Weighted average effect of diluted stock awards	1,004,181	—	789,246
Diluted	82,681,214	77,709,592	75,328,343

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

	Fiscal years ended July 31,		
	2019	2018	2017
Stock options to purchase common stock	—	597,476	24,128
Stock awards	44,196	3,161,157	88,582

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, and interest is 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 its 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.

In accounting for the issuance of the Convertible Senior Notes, the Company separated the Convertible Senior Notes into liability and equity components. 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 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. The excess of the principal amount of the Convertible Senior Notes over its carrying amount is amortized to interest expense using the effective interest method over the term of the Convertible Senior Notes. The equity component of the Convertible Senior Notes is recorded as the difference between the initial proceeds less the fair value of the liability component and will not be remeasured as long as it continues to meet the requirements for equity classification. The equity component is net of issuance costs and recorded as additional paid-in capital in stockholders’ equity.

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

	July 31, 2019	July 31, 2018
Principal	\$ 400,000	\$ 400,000
Less: unamortized debt discount and issuance costs		
Unamortized debt discount	74,213	85,343
Debt issuance cost	8,465	9,529
Net carrying amount	\$ 317,322	\$ 305,128

The following table sets forth the interest expense recognized related to the Convertible Senior Notes (in thousands):

	Fiscal years ended July 31,	
	2019	2018
Contractual interest expense	\$ 5,000	\$ 1,903
Amortization of debt discount	11,131	4,134
Amortization of debt issuance costs	1,063	378
Total	\$ 17,194	\$ 6,415
Effective interest rate of the liability component	5.53%	5.53%

Capped Call

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 as a reduction of the Company’s additional paid-in capital in the accompanying consolidated balance sheets.

7. Commitments and Contingencies

The Company’s contractual obligations and commitments as of July 31, 2019 are as follows (in thousands):

Fiscal Year Ending July 31,	Lease Obligations ⁽¹⁾	Royalty Obligations ⁽²⁾	Purchase Commitments ⁽³⁾	Long-Term Debt ⁽⁴⁾	Total
2020	\$ 10,707	\$ 2,018	\$ 27,149	\$ 5,000	\$ 44,874
2021	15,571	918	6,943	5,000	28,432
2022	14,450	701	3,500	5,000	23,651
2023	13,344	560	227	5,000	19,131
2024	13,174	—	—	5,000	18,174
Thereafter	74,508	—	—	405,000	479,508
Total	\$ 141,754	\$ 4,197	\$ 37,819	\$ 430,000	\$ 613,770

⁽¹⁾ Operating lease agreements primarily represent our obligations to make payments under our non-cancellable lease agreements for our corporate headquarters and worldwide offices through 2028.

- (2) Royalty obligations primarily represent our obligations under our non-cancellable agreements related to software used in certain revenue-generating agreements.
- (3) Purchase commitments consist of agreements to purchase services, entered into in the ordinary course of business. These represent commitments for which a penalty could be imposed if the agreement was canceled for any reason other than an event of default as described by the agreement.
- (4) Long-term debt consists of principal and interest payments on the Company's Convertible Senior Notes. The \$400 million in principal will be due in March 2025.

Leases

The Company leases certain facilities and equipment under operating leases. Lease expense for all worldwide facilities and equipment, which is being recognized on a straight-line basis over the terms of the various leases, was \$15.5 million, \$8.7 million, and \$6.8 million during the years ended July 31, 2019, 2018, and 2017, respectively.

In December 2017, the Company entered into a new lease agreement for its new headquarter facility in San Mateo, California and began recognizing rent expense in December 2018 when access and control of the premises was provided. The contractual lease term expires in December 2029. Total payments committed under the lease are \$126.4 million. In connection with this lease agreement, the Company also entered into an irrevocable stand-by letter of credit to guarantee the \$1.8 million security deposit.

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 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. Accordingly, the Company has not recorded any accrual for claims as of July 31, 2019 and 2018. 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 contracts ("Software Licenses"). Each Software License contains 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. Software Licenses also indemnify the customer against losses, expenses, and liabilities from damages that may be assessed 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 July 31, 2019 and 2018. For several reasons, including the lack of prior indemnification claims and the lack of a monetary liability limit for certain infringement cases under various Software Licenses, 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.

8. Stock-Based Compensation Expense and Shareholders' Equity

Equity Incentive Plans

On September 14, 2011, the Company's Board of Directors adopted the 2011 Stock Plan ("2011 Plan") for the purpose of granting equity-based incentive awards as compensation tools to motivate the Company's workforce. The Company had initially reserved 7,500,000 shares of its common stock for the issuance of awards under the 2011 Plan. The 2011 Plan provides that the number of shares reserved and available for issuance under the plan will automatically increase each January 1, beginning on January 1, 2013, by up to 5% of the outstanding number of shares of the Company's common stock on the immediately preceding December 31. This number is subject to adjustment in the event of a stock split, stock dividend or other defined changes in the Company's capitalization.

In addition, the Company has equity awards outstanding from its other equity incentive plans, the 2006 Stock Plan, the 2009 Stock Plan and the 2010 Restricted Stock Unit Plan, which were discontinued for the purposes of making new grants upon the adoption of the 2011 Plan.

Stock-Based Compensation Expense

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

	Fiscal years ended July 31,		
	2019	2018	2017
Stock-based compensation expense:			
Total stock-based compensation	\$ 91,570	\$ 89,176	\$ 72,695
Net impact of deferred stock-based compensation	(54)	438	(901)
Total stock-based compensation expense	<u>\$ 91,516</u>	<u>\$ 89,614</u>	<u>\$ 71,794</u>
Stock-based compensation expense was charged to the following categories:			
Cost of license and subscription revenue	\$ 3,011	\$ 1,002	\$ 373
Cost of maintenance revenue	1,820	1,886	1,694
Cost of services revenue	22,781	21,856	18,622
Research and development	23,421	25,440	18,123
Sales and marketing	19,246	18,387	16,663
General and administrative	21,237	21,043	16,319
Total stock-based compensation expense	<u>91,516</u>	<u>89,614</u>	<u>71,794</u>
Tax benefit from stock-based compensation	29,159	24,481	23,014
Total stock-based compensation expense, net of tax effect	<u>\$ 62,357</u>	<u>\$ 65,133</u>	<u>\$ 48,780</u>

Total unrecognized stock-based compensation expense for the Company's options and Stock Awards was as follows:

	As of July 31, 2019	
	Unrecognized Expense (in thousands)	Weighted Average Expected Recognition Period (in years)
Stock Options	\$ 2,319	1.5
Stock Awards	158,668	2.2
Total unrecognized stock-based compensation expense	<u>\$ 160,987</u>	

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	Weighted Average Grant Date Fair Value	Aggregate Intrinsic Value ⁽¹⁾ (in thousands)
Balance as of July 31, 2016	2,727,724	\$ 50.08	\$ 167,673
Granted	1,542,235	\$ 61.22	
Released	(1,372,770)	\$ 49.38	\$ 81,427
Canceled	(263,104)	\$ 53.53	
Balance as of July 31, 2017	2,634,085	\$ 56.62	\$ 190,076
Granted	1,814,084	\$ 79.65	
Released	(1,260,758)	\$ 56.92	\$ 103,957
Canceled	(255,256)	\$ 63.66	
Balance as of July 31, 2018	2,932,155	\$ 69.43	\$ 252,752
Granted	1,238,700	\$ 100.01	
Released	(1,398,676)	\$ 69.20	\$ 133,050
Canceled	(387,506)	\$ 75.16	
Balance as of July 31, 2019	2,384,673	\$ 85.20	\$ 243,427
Expected to vest as of July 31, 2019	2,384,673	\$ 85.20	\$ 243,427

⁽¹⁾ Aggregate intrinsic value at each fiscal year end represents the total market value of Stock Awards at the Company's closing stock price of \$102.08, \$86.20, and \$72.16 on July 31, 2019, 2018, and 2017, respectively. Aggregate intrinsic value for released Stock Awards represents the total market value of released Stock Awards at date of release.

RSAs are issued and outstanding upon grant; however, vesting is based on continued employment. The weighted average grant date fair value is based on the market value of our common stock on the date of grant.

Certain executives and employees of the Company received PSUs and TSR PSUs in addition to RSUs. The PSUs included performance-based conditions and vest over a four-year period. The TSR PSUs are subject to total shareholder return rankings relative to market-based conditions (software companies in the S&P Index) for a specified performance period or specified performance 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 of \$13.3 million, \$19.1 million, and \$9.4 million related to these performance-based and market-based stock awards in fiscal years 2019, 2018, and 2017, respectively.

Stock Options

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

	Number of Stock Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value ⁽¹⁾ (in thousands)
Balance as of July 31, 2016	1,158,572	\$ 15.45	4.0	\$ 53,316
Granted	—	\$ —		
Exercised	(594,936)	\$ 9.35		\$ 30,636
Canceled	(8,000)	\$ 2.74		
Balance as of July 31, 2017	555,636	\$ 22.17	4.0	\$ 27,777
Granted ⁽²⁾	137,057	\$ 10.23		
Exercised	(150,924)	\$ 13.32		\$ 10,710
Canceled	(4,705)	\$ 40.05		
Balance as of July 31, 2018	537,064	\$ 21.45	4.3	\$ 34,774
Granted	—	\$ —		
Exercised	(301,901)	\$ 13.11		\$ 24,731
Canceled	(18,436)	\$ 9.43		
Balance as of July 31, 2019	216,727	\$ 34.10	5.2	\$ 14,733
Vested and expected to vest as of July 31, 2019	216,727	\$ 34.10	5.2	\$ 14,733
Exercisable as of July 31, 2019	181,783	\$ 38.57	4.8	\$ 11,546

⁽¹⁾ Aggregate intrinsic value at each fiscal year end represents the difference between the Company's closing stock price of \$102.08, \$86.20, and \$72.16 on July 31, 2019, 2018, and 2017, respectively, and the exercise price of the option. Aggregate intrinsic value for exercised options represents the difference between the Company's stock price at date of exercise and the exercise price.

⁽²⁾ Represents options assumed through the Cyence acquisition on November 1, 2017.

Valuation of Awards

TSR PSUs

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

	Fiscal years ended July 31,		
	2019	2018	2017
Expected term (in years)	2.88	2.88	2.66 - 2.88
Risk-free interest rate	2.79%	1.44%	0.89% - 1.34%
Expected volatility of the Company	27.2%	28.0%	30.2% - 31.5%
Average expected volatility of the peer companies in the S&P Index	33.0%	34.7%	36.9% - 37.0%
Expected dividend yield	—%	—%	—%

The number of TSR PSUs that may ultimately vest will vary based on the relative performance of the Company's total shareholder return rankings relative to the software companies in the S&P Index for a specified performance 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 ultimate achievement of the plan's performance 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 condition 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.

Stock Options

The per share fair value of each stock option was determined using the Black-Scholes option-pricing model with the following assumptions:

	Fiscal years ended July 31,		
	2019	2018	2017
Expected life (in years)	*	1.27	*
Risk-free interest rate	*	1.48%	*
Expected volatility	*	24.12%	*
Expected dividend yield	*	—%	*
Weighted average fair value of options granted	*	\$67.90	*

* There were no options granted during the fiscal years ended July 31, 2017 and 2019.

Common Stock Reserved for Issuance

As of July 31, 2019 and 2018, 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, 82,140,883 and 80,611,698 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 up to 5% of the number of shares of common stock issued and outstanding on the preceding December 31st is added to the Company's 2011 Stock Plan reserve. As of July 31, 2019 and 2018, the Company had reserved shares of common stock for future issuance as follows:

	July 31, 2019	July 31, 2018
Exercise of stock options to purchase common stock	216,727	537,064
Vesting of restricted stock awards	2,384,673	2,932,155
Shares available for grant under stock plans	24,776,361	21,592,494
Total common stock reserved for issuance	27,377,761	25,061,713

In March 2018, the Company completed a public offering of 2,628,571 shares of its common stock. The public offering price of the shares sold in the offering was \$87.50 per share. No shares were sold by the Company's stockholders in this public offering.

9. Income Taxes

On December 22, 2017, the Tax Act was enacted into law, which made changes to U.S. tax law, including, but not limited to: (1) reducing the U.S. Federal corporate income tax rate from 35% to 21%; (2) requiring companies to pay a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries; (3) generally eliminating U.S. Federal corporate income taxes on dividends from foreign subsidiaries; (4) capitalizing R&D expenses which are amortized over five to 15 years; and (5) other changes to how foreign and domestic earnings are taxed.

The Tax Act includes a provision to tax global intangible low-taxed income ("GILTI") of foreign subsidiaries and a base erosion anti-abuse tax ("BEAT") measure that taxes certain payments between a U.S. corporation and its foreign subsidiaries. These provisions of the Tax Act were effective for the Company beginning August 1, 2018 and had no impact on the tax benefit for the year ended July 31, 2019. Under U.S. GAAP, the Company can make an accounting policy election to either treat taxes

due on the GILTI inclusion as a current period expense or factor such amounts into its measurement of deferred taxes. The Company has elected the current period expense method. The Company has finalized its assessment of the transitional impacts of the Tax Act.

In December 2018, the IRS issued proposed regulations related to the BEAT tax, which the Company is in the process of evaluating. If the proposed BEAT regulations are finalized in their current form, the impact may be material to the tax provision in the quarter of enactment.

The U.S. Treasury Department, the Internal Revenue Service (“IRS”), and other standard-setting bodies will continue to interpret or issue guidance on how provisions of the Tax Act will be applied or otherwise administered. The Company continues to obtain, analyze, and interpret guidance as it is issued and will revise its estimates as additional information becomes available. Any legislative changes, including any other new or proposed U.S. Department of the Treasury regulations that have yet to be issued, may result in income tax adjustments, which could be material to our provision for income taxes and effective tax rate in the period any such changes are enacted.

The Company’s income (loss) before provision for (benefit from) income taxes for the years ended July 31, 2019, 2018 and 2017 is as follows (in thousands):

	Fiscal years ended July 31,		
	2019	2018	2017
Domestic	\$ (1,778)	\$ (13,501)	\$ 21,723
International	14,230	5,225	6,803
Income (loss) before provision for (benefit from) income taxes	\$ 12,452	\$ (8,276)	\$ 28,526

The provision for income taxes consisted of the following (in thousands):

	Fiscal years ended July 31,		
	2019	2018	2017
Current:			
U.S. Federal	\$ 3,297	\$ 2,047	\$ 6,339
State	48	219	1,829
Foreign	1,859	2,203	3,595
Total current	5,204	4,469	11,763
Deferred:			
U.S. Federal	(13,683)	15,766	(686)
State	(989)	(1,460)	(429)
Foreign	1,188	(308)	(194)
Total deferred	(13,484)	13,998	(1,309)
Total provision for (benefit from) income taxes	\$ (8,280)	\$ 18,467	\$ 10,454

Differences between income taxes calculated using the statutory federal income tax rate of 21% in the fiscal year ended July 31, 2019, 26.9% in the fiscal year ended July 31, 2018, and 35% in the fiscal year ended July 31, 2017 and the provision for income taxes are as follows (in thousands):

	Fiscal years ended July 31,		
	2019	2018	2017
Statutory federal income tax	\$ 2,617	\$ (2,224)	\$ 9,984
State taxes, net of federal benefit	(939)	(993)	806
Share-based compensation	(8,013)	(8,715)	2,517
Non-deductible officers' compensation	3,938	3,230	959
Foreign income taxed at different rates	203	1,022	(819)
Research tax credits	(6,943)	(5,822)	(2,377)
Re-measurement of U.S. deferred taxes	—	36,125	—
Non-deductible acquisition costs	—	1,270	270
Domestic production activity deduction	—	—	(1,370)
Permanent differences and others	918	666	484
Change in valuation allowance	(61)	(6,092)	—
Total provision for (benefit from) income taxes	<u>\$ (8,280)</u>	<u>\$ 18,467</u>	<u>\$ 10,454</u>

The tax effects of temporary differences that gave rise to significant portions of deferred tax assets and liabilities are as follows (in thousands):

	As of July 31,	
	2019	2018
Accruals and reserves	\$ 7,870	\$ 12,129
Stock-based compensation	6,353	7,658
Deferred revenue	2,316	4,023
Property and equipment	—	1,268
Net operating loss carryforwards	55,881	56,668
Tax credits	74,819	60,450
Total deferred tax assets	<u>147,239</u>	<u>142,196</u>
Less valuation allowance	31,421	28,541
Net deferred tax assets	<u>115,818</u>	<u>113,655</u>
Less deferred tax liabilities:		
Intangible assets	7,413	11,461
Convertible debt	10,274	11,567
Property and equipment	1,435	—
Unremitted foreign earnings	302	258
Capitalized commissions	6,086	—
Total deferred tax liabilities	<u>25,510</u>	<u>23,286</u>
Deferred tax assets, net	<u>90,308</u>	<u>90,369</u>
Less foreign deferred revenue	—	69
Less foreign capitalized commissions	906	—
Total net deferred tax assets	<u>89,402</u>	<u>90,300</u>

The Company considered both positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies, historic book profit/loss, prior taxable income/loss, and results of future operations, and determined that a valuation allowance was not required for a significant portion of its deferred tax assets. A valuation allowance of \$31.4 million and \$28.5 million remained as of July 31, 2019 and 2018, respectively. The increase of \$2.9 million in the valuation allowance in the current fiscal year relates primarily to net operating losses and income tax credits incurred in certain tax jurisdictions for which no tax benefit was recognized.

As of July 31, 2019, the Company had U.S. Federal, California, and other states net operating loss (“NOL”) carryforwards of \$217.0 million, \$63.8 million, and \$103.4 million, respectively. The U.S. Federal and California NOL carryforwards will start to expire in 2027 and 2019, respectively.

As of July 31, 2019, the Company had research and development tax credits (“R&D credit”) carryforwards of the following (in thousands):

U.S. Federal	\$	40,839
California		33,818
Total R&D credit carryforwards	\$	74,657

The U.S. Federal R&D credits will start to expire in 2023 and the California R&D tax credits do not expire.

Federal and California laws impose restrictions on the utilization of net operating loss carryforwards and R&D credit carryforwards in the event of a change in ownership of the Company, as defined by Internal Revenue Code 382 and 383. The Company experienced an ownership change in the past that does not materially impact the availability of its net operating losses and tax credits. However, should there be an ownership change in the future, the Company’s ability to utilize existing carryforwards could be substantially restricted.

The Company provides U.S. income taxes on the earnings of foreign subsidiaries, unless the subsidiaries’ earnings are considered indefinitely reinvested outside the United States. As of July 31, 2019, the Company has recorded a provisional estimate for U.S. income taxes on undistributed earnings from foreign subsidiaries of \$0.3 million. The Company may repatriate foreign earnings that have been taxed in the United States 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.

Unrecognized Tax Benefits

Activity related to unrecognized tax benefits is as follows (in thousands):

	Fiscal years ended July 31,		
	2019	2018	2017
Unrecognized tax benefit - beginning of period	\$ 10,321	\$ 9,346	\$ 7,687
Gross increases - prior period tax positions	98	729	712
Gross decreases - prior period tax positions	(88)	(878)	(691)
Gross increases - current period tax positions	1,302	1,124	1,638
Unrecognized tax benefit - end of period	\$ 11,633	\$ 10,321	\$ 9,346

During the year ended July 31, 2019, the Company’s unrecognized tax benefits increased by \$1.3 million, primarily associated with the Company’s U.S. Federal and California R&D credits. As of July 31, 2019, the Company had unrecognized tax benefits of \$6.2 million that, if recognized, would affect the Company’s effective tax rate. An estimate of the range of possible change within the next 12 months cannot be made at this time.

The Company, or one of its subsidiaries, files income taxes in the U.S. Federal jurisdiction and various state and foreign jurisdictions. If the Company utilizes net operating losses or tax credits in future years, the U.S. Federal, state and local, and non-U.S. tax authorities may examine the tax returns covering the period in which the net operating losses and tax credits arose. As a result, the Company’s tax returns in the U.S. and California remain open to examination from fiscal years 2002 through 2019. As of July 31, 2019, the Company has no income tax audits in progress in the U.S. or foreign jurisdictions.

10. Defined Contribution and Other Post-Retirement Plans

The Company’s employee savings and retirement plan in the United States is qualified under Section 401(k) of the Internal Revenue Code. Employees on the Company’s U.S. payroll are automatically enrolled when they meet eligibility requirements, unless they decline participation. Upon enrollment employees are provided with tax-deferred salary deductions and various investment options. Employees may contribute up to 60% of their eligible salary up to the statutory prescribed annual limit. The Company matches employees’ contributions up to \$5,000 per participant per calendar year. Certain of the Company’s foreign subsidiaries also have defined contribution plans in which a majority of its employees participate and the Company makes matching contributions. The Company’s contributions to its 401(k) and foreign subsidiaries’ plans were \$9.9 million, \$8.7 million, and \$7.1 million for the fiscal years ended July 31, 2019, 2018, and 2017, respectively.

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.

Revenue by country and region based on the billing address of the customer is as follows (in thousands):

	Fiscal years ended July 31,		
	2019	2018	2017
United States	\$ 446,586	\$ 409,729	\$ 301,083
Canada	46,969	45,591	50,956
Other Americas	18,118	19,154	19,447
Total Americas	511,673	474,474	371,486
United Kingdom	39,996	36,653	32,554
Other EMEA	96,390	75,178	48,727
Total EMEA	136,386	111,831	81,281
Total APAC	71,455	66,544	56,766
Total revenue	\$ 719,514	\$ 652,849	\$ 509,533

No country other than those listed above accounted for more than 10% of revenue during the years ended July 31, 2019, 2018 and 2017.

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

	July 31, 2019	July 31, 2018
Americas	\$ 468,545	\$ 449,588
EMEA	4,633	5,491
APAC	50	47
Total	\$ 473,228	\$ 455,126

Item 9. Changes in and Disagreements with Accountant on Accounting and Financial Disclosure

None.

Item 9A. 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 Exchange Act), as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, we have concluded that our disclosure controls and procedures were deemed effective as of July 31, 2019.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting as defined in Rule 13a-15(f) or 15d-15(f) of the Exchange Act. Internal control over financial reporting is a process designed 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, and includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of July 31, 2019, using the criteria set forth in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission's 2013 framework. Based on this assessment and those criteria, management concluded that our internal control over financial reporting was effective as of July 31, 2019.

Our internal control over financial reporting has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report, which appears in Part II, Item 8 of this Annual Report on Form 10-K.

Remediation Plan

Our management and Board of Directors are committed to the continued improvement of our overall system of internal control over financial reporting. In April 2019, 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, as discussed in our Form-10-K/A for the fiscal year ended July 31, 2018, which caused us to restate our consolidated financial statements as of and for the years ended July 31, 2018 and 2017. 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 the Company's annual or interim financial statements will not be prevented or detected on a timely basis.

Upon identification of this material weakness, we began an evaluation of the related control environment, developed a remediation plan, and implemented the internal control changes that were identified as part of that plan. This plan included the implementation of a redesigned control to ensure appropriate risk assessment of the impact that contract amendments have on revenue recognition. During the third and fourth fiscal quarters of the fiscal year ended July 31, 2019, we implemented changes to our processes and controls. Based on the results of our evaluation of the updated disclosure controls and procedures, we have determined that the updated controls and procedures are effective as of July 31, 2019. As a result, we believe this material weakness has been sufficiently remediated.

Inherent Limitations of Internal Controls

Our management, including our Chief Executive Officer and Chief 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

We implemented modules for our order management and revenue recognition functions during fiscal year 2019. These modules are intended to provide us with enhanced transactional processing and management tools compared to our legacy system and to enhance internal control over financial reporting. We have taken the necessary steps to monitor and maintain appropriate internal control over financial reporting during this period. Additionally, we will continue to evaluate the operating effectiveness of related controls during subsequent periods.

There were no changes in our internal control over financial reporting, other than those related to the implementation of our remediation plan and the modules for order management and revenue recognition discussed above, identified in management's evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act in our fiscal year 2019 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

We have adopted a Code of Business Conduct and Ethics that applies to all of our directors, officers, and employees, including our principal executive officer and principal financial officer. The Code of Business Conduct and Ethics is posted on our investor relations website.

We will post any amendments to, or waivers from, a provision of this Code of Business Conduct and Ethics by posting such information on our investor relations website.

The other information required by this item will be contained in our definitive proxy statement to be filed with the Securities and Exchange Commission in connection with our 2019 annual meeting of stockholders (the "Proxy Statement"), which is expected to be filed not later than 120 days after the end of our fiscal year ended July 31, 2019, and is incorporated in this report by reference.

Item 11. *Executive Compensation*

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

Item 13. *Certain Relationships and Related Transactions, and Director Independence*

The information, if any, required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

Item 14. *Principal Accountant Fees and Services*

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. *Exhibits and Financial Statement Schedules*

(a) The following documents are filed as part of this report:

1. Consolidated Financial Statements

See Index to Consolidated Financial Statements at Item 8 herein.

2. Financial Statement Schedules

Schedules have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes herein.

3. Exhibits

EXHIBIT INDEX

The exhibits listed below are filed or incorporated by reference as part of this Annual Report on Form 10-K.

Exhibit Number	Description	Incorporated by Reference From Form	Incorporated by Reference From Exhibit Number	Date Filed
2.1	Agreement and Plan of Reorganization, by and among Guidewire Software, Inc., Cyence Inc., Caesar Acquisition Sub I, Inc., Caesar Acquisition Sub II, LLC and Shareholder Representative Services LLC dated October 5, 2017.	8-K	2.1	November 2, 2017
3.1	Amended and Restated Certificate of Incorporation.	10-Q	3.1	March 14, 2012
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
4.2	Indenture, dated as of March 13, 2018, by and between Guidewire Software, Inc. and U.S. Bank National Association.	8-K	4.1	March 13, 2018
4.3	First Supplemental Indenture, dated as of March 13, 2018, by and between Guidewire Software, Inc. and U.S. Bank National Association.	8-K	4.2	March 13, 2018
4.4	Form of 1.25% Convertible Senior Note Due March 15, 2025.	8-K	4.3	March 13, 2018
4.5	Description of the Company's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934, as amended	Filed herewith	—	—
10.1	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers.	S-1/A	10.1	October 28, 2011
10.2	2006 Stock Plan and forms of agreements thereunder.	S-1	10.2	September 2, 2011
10.3	2009 Stock Plan and forms of agreements thereunder.	S-1	10.3	September 2, 2011
10.4	2010 Restricted Stock Unit Plan and forms of agreements thereunder.	S-1	10.4	September 2, 2011
10.5	2011 Stock Plan and forms of agreements thereunder.	S-1/A	10.5	December 13, 2011
10.6	Form of Executive Agreement.	10-K	10.6	September 17, 2014
10.7	Senior Executive Incentive Bonus Plan.	S-1/A	10.12	December 13, 2011
10.8	Lease Agreement between Parkside Towers, L.P. and the Registrant dated as of December 5, 2011.	S-1/A	10.13	December 13, 2011
10.9	Form of Performance-Based Restricted Stock Unit Award Agreement under the 2011 Stock Plan.	10-Q	10.9	December 2, 2015
10.10	Form of Capped Call Confirmation.	8-K	10.1	March 13, 2018
10.11	Lease Agreement between Bay Meadows Station 2 Investors, LLC and the Registrant dated as of December 18, 2017.	10-K	10.11	September 19, 2018
21.1	Subsidiaries of the Registrant.	Filed herewith	—	—
23.1	Consent of KPMG LLP, Independent Registered Public Accounting Firm.	Filed herewith	—	—

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	—	—

* The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Annual Report on Form 10-K 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 Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: September 30, 2019

GUIDEWIRE SOFTWARE, INC.

By: /s/ Curtis Smith

Curtis Smith
Chief Financial Officer
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

Each person whose individual signature appears below hereby authorizes and appoints Mike Rosenbaum, Curtis Smith, and Winston King, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Mike Rosenbaum</u> Mike Rosenbaum	Chief Executive Officer and Director (Principal Executive Officer)	September 30, 2019
<u>/s/ Curtis Smith</u> Curtis Smith	Chief Financial Officer (Principal Financial and Accounting Officer)	September 30, 2019
<u>/s/ Marcus S. Ryu</u> Marcus S. Ryu	Director (Chairman of the Board)	September 30, 2019
<u>/s/ Andrew Brown</u> Andrew Brown	Director	September 30, 2019
<u>/s/ Margaret Dillon</u> Margaret Dillon	Director	September 30, 2019
<u>/s/ Guy Dubois</u> Guy Dubois	Director	September 30, 2019
<u>/s/ Peter Gassner</u> Peter Gassner	Director	September 30, 2019
<u>/s/ Michael Keller</u> Michael Keller	Director	September 30, 2019
<u>/s/ Paul Lavin</u> Paul Lavin	Director	September 30, 2019
<u>/s/ Catherine P. Lego</u> Catherine P. Lego	Director	September 30, 2019
<u>/s/ Clifton Thomas Weatherford</u> Clifton Thomas Weatherford	Director	September 30, 2019

EXHIBIT 4.5

DESCRIPTION OF THE COMPANY'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

As of July 31, 2019, Guidewire Software, Inc. ("Guidewire," the "Company," "we," "us," and "our") had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended: our common stock.

DESCRIPTION OF COMMON STOCK

Our authorized capital stock consists of 500,000,000 shares of common stock, \$0.0001 par value, and 25,000,000 shares of undesignated preferred stock, \$0.0001 par value. The following description of our common stock does not purport to be complete and is subject to, and qualified in its entirety by, our amended and restated certificate of incorporation and amended and restated bylaws, each of which is incorporated by reference as an exhibit to our Annual Report on Form 10-K for the year ended July 31, 2019.

Common Stock

The holders of our common stock are entitled to one vote per share on all matters to be voted on by the stockholders. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of common stock are entitled to receive ratably such dividends as may be declared by the board of directors out of funds legally available therefore. In the event we liquidate, dissolve or wind up, holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preferences of any outstanding shares of preferred stock. Holders of common stock have no preemptive, conversion or subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and nonassessable.

Our common stock is listed and traded on the New York Stock Exchange under the symbol "GWRE."

Preferred Stock – Limitations on Rights of Holders of Common Stock

Our board of directors may, without further action by our stockholders, fix the rights, preferences, privileges and restrictions of up to an aggregate of 25,000,000 shares of preferred stock in one or more series and authorize their issuance. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of our common stock. Any issuance of our preferred stock could adversely affect the voting power of holders of our common stock and the likelihood that such holders would receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control or other corporate action.

Transfer Agent

The transfer agent for our common stock is Computershare Trust Company, N.A.

Anti-Takeover Effects of Delaware Law and Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Certain provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, may have the effect of discouraging coercive takeover practices and inadequate takeover bids. These provisions are also designed, in part, to encourage persons seeking to acquire

control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Limits on ability of stockholders to call a special meeting. Our amended and restated bylaws provide that special meetings of the stockholders may be called only by a majority of the board of directors then in office. These restrictions may delay the ability of our stockholders to force consideration of a proposal or for holders controlling a majority of our capital stock to take any action, including the removal of directors.

Requirements for advance notification of stockholder nominations and proposals. Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive office not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting the preceding year. As a result, our amended and restated bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed. These provisions may also 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 our company.

No cumulative voting. The Delaware General Corporation Law provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless our amended and restated certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation and amended and restated bylaws do not expressly provide for cumulative voting.

Board Composition and Filling Vacancies. Our amended and restated certificate of incorporation provides for the division of our board of directors into three classes serving staggered three-year terms, with one class being elected each year. Our amended and restated certificate of incorporation also provides that directors may be removed only for cause. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The classification of directors, together with the limitations on removal of directors and treatment of vacancies, has the effect of making it more difficult for stockholders to change the composition of our board of directors.

No Written Consent of Stockholders. Our amended and restated certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our amended and restated bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

Amendment to Certificate of Incorporation and Bylaws. Any amendment of our amended and restated certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our amended and restated certificate of incorporation, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, board composition, limitation of liability and the amendment of our amended and restated certificate of incorporation must be approved by not less than 66 2/3% of the outstanding shares entitled to vote on the amendment, and not less than 66 2/3% of the outstanding shares of each class entitled to vote thereon as a class. Our amended and restated bylaws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the bylaws; and may also be amended by the affirmative vote of a majority of the outstanding shares entitled to vote on the amendment.

Undesignated Preferred Stock. Our amended and restated certificate of incorporation provides for 25,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable

our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our amended and restated certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Section 203 of the Delaware General Corporation Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder;
- at or after the time the stockholder became interested, the business combination was approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, lease, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Subsidiaries of the Registrant

Subsidiary	Country or Jurisdiction
Guidewire Software Pty Ltd.	Australia
Guidewire Servicos de Software Services do Brazil Ltda	Brazil
Guidewire Software Canada Ltd.	Canada
Guidewire Software (Beijing) Co. Ltd.	China
Guidewire Software Denmark ApS	Denmark
Guidewire Software France S.A.S	France
Guidewire Software GmbH	Germany
Cyence India Private Limited	India
Guidewire Software (Ireland) Limited.	Ireland
Guidewire Software (Italy) S.r.l.	Italy
Guidewire Software Japan K.K.	Japan
Guidewire Software (Malaysia) Sdn. BHD	Malaysia
Guidewire Software Poland Sp. z o.o.	Poland
Guidewire Software Spain, S.L.	Spain
Guidewire Software (Switzerland) GmbH	Switzerland
Guidewire Software (UK) Limited	United Kingdom
ISCS Analytics, LLC	United States (California)
Cyence LLC	United States (Delaware)
EagleEye Analytics, LLC	United States (Delaware)
FirstBest Systems, LLC	United States (Delaware)
SM Insurance Solutions LLC	United States (Delaware)

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Guidewire Software, Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-230132, 333-223478, 333-216530, 333-209906, 333-202541, 333-194290, 333-187004, and 333-179799) on Form S-8, and in the registration statements (Nos. 333-223487, 333-221298, 333-191856, and 333-191834) on Form S-3 of Guidewire Software, Inc. of our report dated September 30, 2019, with respect to the consolidated balance sheets of Guidewire Software, Inc. and subsidiaries as of July 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three-year period ended July 31, 2019, and the related notes, and the effectiveness of Guidewire Software, Inc.'s internal control over financial reporting as of July 31, 2019, which report appears in the July 31, 2019 annual report on Form 10-K of Guidewire Software, Inc. Our report refers to a change in the method of accounting for revenue from contracts with customers in the year ended July 31, 2019 due to the adoption of FASB Accounting Standards Update 2014-09, *Revenue from Contracts with Customers (Topic 606)*.

/s/ KPMG LLP

Santa Clara, California
September 30, 2019

**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 Annual Report on Form 10-K 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: September 30, 2019

By: /s/ Mike Rosenbaum

Mike Rosenbaum

Chief Executive Officer

(Principal Executive Officer)

**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, Curtis Smith, certify that:

1. I have reviewed this Annual Report on Form 10-K 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: September 30, 2019

By: /s/ Curtis Smith

Curtis Smith

Chief Financial Officer

(Principal Financial and Accounting Officer)

**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 Annual Report on Form 10-K of Guidewire Software, Inc. for the year ended July 31, 2019 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: September 30, 2019

By: /s/ Mike Rosenbaum

Mike Rosenbaum

Chief Executive Officer

(Principal Executive Officer)

In connection with the Annual Report on Form 10-K/A of Guidewire Software, Inc. for the year ended July 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Curtis Smith, 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: September 30, 2019

By: /s/ Curtis Smith

Curtis Smith

Chief Financial Officer

(Principal Financial and Accounting Officer)