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

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 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: 001-34846

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

Delaware	**75-2788861**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
2201 Lakeside Boulevard Richardson, Texas	**75082-4305**
(Address of principal executive offices)	**(Zip Code)**

(972) 820-3000
(Registrant's telephone number, including area code)

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

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

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

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

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class	April 24, 2019
Common Stock, $0.001 par value	94,593,387

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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

RealPage, Inc.

Condensed Consolidated Balance Sheets
(in thousands, except share and per share data)

	March 31, 2019	December 31, 2018
	(unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	$ 252,657	$ 228,159
Restricted cash	103,768	154,599
Accounts receivable, less allowances of $7,943 and $8,850 at March 31, 2019 and December 31, 2018, respectively	125,068	123,596
Prepaid expenses	19,702	19,214
Other current assets	11,383	15,185
Total current assets	512,578	540,753
Property, equipment, and software, net	153,956	153,528
Right-of-use assets	91,023	—
Goodwill	1,052,725	1,053,119
Intangible assets, net	271,642	287,378
Deferred tax assets, net	40,295	42,602
Other assets	22,197	20,393
Total assets	$ 2,144,416	$ 2,097,773
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 29,756	$ 25,312
Accrued expenses and other current liabilities	85,956	95,482
Current portion of deferred revenue	121,536	120,704
Current portion of term loans	16,133	16,133
Convertible notes, net	295,862	—
Customer deposits held in restricted accounts	103,763	154,601
Total current liabilities	653,006	412,232
Deferred revenue	4,160	4,902
Term loans, net	283,659	287,582
Convertible notes, net	—	292,843
Lease liabilities, net of current portion	105,795	—
Other long-term liabilities	12,421	37,190
Total liabilities	1,059,041	1,034,749
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Preferred stock, $0.001 par value: 10,000,000 shares authorized and zero shares issued and outstanding at March 31, 2019 and December 31, 2018, respectively	—	—
Common stock, $0.001 par value: 250,000,000 shares authorized, 95,998,176 and 95,991,162 shares issued and 94,733,242 and 93,650,127 shares outstanding at March 31, 2019 and December 31, 2018, respectively	96	96
Additional paid-in capital	1,167,950	1,187,683
Treasury stock, at cost: 1,264,934 and 2,341,035 shares at March 31, 2019 and December 31, 2018, respectively	(33,753)	(65,470)
Accumulated deficit	(47,546)	(58,793)
Accumulated other comprehensive loss	(1,372)	(492)
Total stockholders' equity	1,085,375	1,063,024
Total liabilities and stockholders' equity	$ 2,144,416	$ 2,097,773

See accompanying notes.

RealPage, Inc.

Condensed Consolidated Statements of Operations
(in thousands, except per share data)
(unaudited)

	Three Months Ended March 31,	
	2019	2018
Revenue:		
On demand	$ 226,519	$ 193,300
Professional and other	7,787	8,001
Total revenue	234,306	201,301
Cost of revenue	90,194	72,837
Amortization of product technologies	9,514	8,295
Gross profit	134,598	120,169
Operating expenses:		
Product development	29,897	29,040
Sales and marketing	44,823	37,680
General and administrative	28,143	27,090
Amortization of intangible assets	9,836	8,089
Total operating expenses	112,699	101,899
Operating income	21,899	18,270
Interest expense and other, net	(5,980)	(7,670)
Income before income taxes	15,919	10,600
Income tax expense (benefit)	4,647	(301)
Net income	$ 11,272	$ 10,901
Net income per share attributable to common stockholders:		
Basic	$ 0.12	$ 0.13
Diluted	$ 0.12	$ 0.13
Weighted average common shares outstanding:		
Basic	91,490	81,166
Diluted	95,561	84,817

See accompanying notes.

RealPage, Inc.

Condensed Consolidated Statements of Comprehensive Income
(in thousands)
(unaudited)

	Three Months Ended March 31,	
	2019	**2018**
Net income	$ 11,272	$ 10,901
Other comprehensive (loss) income:		
Unrealized (loss) gain on derivative instruments, net of tax	(586)	258
Reclassification adjustment for gains included in earnings on derivative instruments, net of tax	(220)	(99)
Foreign currency translation adjustment	(99)	(127)
Other comprehensive (loss) income, net of tax	(905)	32
Comprehensive income	$ 10,367	$ 10,933

See accompanying notes.

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RealPage, Inc.

Condensed Consolidated Statements of Stockholders' Equity
(in thousands)
(unaudited)

	Three-Month Period Ended March 31, 2019							
	Common Stock			Accumulated		Treasury Stock		
	Shares	Amount	Additional Paid-in Capital	Other Comprehensive Loss	Accumulated Deficit	Shares	Amount	Total Stockholders' Equity
Balance as of January 1, 2019	95,991	$ 96	$ 1,187,683	$ (492)	$ (58,793)	2,341	$ (65,470)	$ 1,063,024
Cumulative effect of adoption of ASU 2017-12	—	—	—	25	(25)	—	—	—
Stock option exercises	7	—	(837)	—	—	(89)	2,714	1,877
Issuance of restricted stock	—	—	(34,456)	—	—	(1,130)	34,456	—
Treasury stock purchased, at cost	—	—	437	—	—	143	(5,453)	(5,016)
Stock-based compensation	—	—	15,123	—	—	—	—	15,123
Other comprehensive income - derivative instruments	—	—	—	(806)	—	—	—	(806)
Foreign currency translation	—	—	—	(99)	—	—	—	(99)
Net income	—	—	—	—	11,272	—	—	11,272
Balance as of March 31, 2019	95,998	$ 96	$ 1,167,950	$ (1,372)	$ (47,546)	1,265	$ (33,753)	$ 1,085,375

See accompanying notes.

RealPage, Inc.

Condensed Consolidated Statements of Stockholders' Equity, continued
(in thousands)
(unaudited)

	Three-Month Period Ended March 31, 2018							
	Common Stock					Treasury Stock		
	Shares	Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Shares	Amount	Total Stockholders' Equity
Balance as of January 1, 2018	87,153	$ 87	$ 637,851	$ 243	$ (75,046)	3,973	$ (61,260)	$ 501,875
Cumulative effect of adoption of ASU 2014-09	—	—	—	—	2,221	—	—	2,221
Stock option exercises	7	—	5,038	—	—	(241)	—	5,038
Issuance of restricted stock	—	—	(1,303)	—	—	(1,336)	1,303	—
Treasury stock purchased, at cost	—	—	—	—	—	257	(8,450)	(8,450)
Stock-based compensation	—	—	10,410	—	—	—	—	10,410
Other comprehensive income - derivative instruments	—	—	—	159	—	—	—	159
Foreign currency translation	—	—	—	(127)	—	—	—	(127)
Net income	—	—	—	—	10,901	—	—	10,901
Balance as of March 31, 2018	87,160	$ 87	$ 651,996	$ 275	$ (61,924)	2,653	$ (68,407)	$ 522,027

See accompanying notes.

RealPage, Inc.

Condensed Consolidated Statements of Cash Flows
(in thousands)
(unaudited)

	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018
Cash flows from operating activities:		
Net income	$ 11,272	$ 10,901
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	27,824	23,260
Amortization of debt discount and issuance costs	3,234	3,012
Amortization of right-of-use assets	3,005	—
Deferred taxes	2,550	(1,154)
Stock-based expense	14,913	10,318
Loss on disposal and impairment of other long-lived assets	286	942
Change in fair value of equity investment	(2,600)	—
Acquisition-related consideration	405	402
Changes in assets and liabilities, net of assets acquired and liabilities assumed in business combinations:		
Accounts receivable	(983)	15,648
Prepaid expenses and other current assets	3,197	(3,738)
Other assets	185	(1,015)
Accounts payable	4,001	6,943
Accrued compensation, taxes, and benefits	(10,603)	(7,391)
Deferred revenue	90	(3,031)
Customer deposits	(50,252)	16,277
Other current and long-term liabilities	(2,532)	(603)
Net cash provided by operating activities	3,992	70,771
Cash flows from investing activities:		
Purchases of property, equipment, and software	(10,873)	(12,660)
Purchase of other investment	—	(1,800)
Net cash used in investing activities	(10,873)	(14,460)
Cash flows from financing activities:		
Payments on term loans	(4,033)	(2,016)
Payments of deferred financing costs	—	(1,087)
Payments on finance lease obligations	(769)	(114)
Payments of acquisition-related consideration	(11,412)	(776)
Proceeds from exercise of stock options	1,877	5,038
Purchase of treasury stock related to stock-based compensation	(5,016)	(8,450)
Net cash used in financing activities	(19,353)	(7,405)
Net (decrease) increase in cash, cash equivalents and restricted cash	(26,234)	48,906
Effect of exchange rate on cash	(99)	(127)
Cash, cash equivalents and restricted cash:		
Beginning of period	382,758	165,345
End of period	$ 356,425	$ 214,124

See accompanying notes.

RealPage, Inc.

Condensed Consolidated Statements of Cash Flows, continued
(in thousands)
(unaudited)

	Three Months Ended March 31,	
	2019	2018
Supplemental cash flow information:		
Cash paid for interest	$ 1,378	$ 2,886
Cash paid (received) for income taxes, net	$ 138	$ (71)
Non-cash investing activities:		
Accrued property, equipment, and software	$ 1,805	$ 675

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the Condensed Consolidated Balance Sheets and that shown in the Condensed Consolidated Statements of Cash Flows:

	March 31, 2019	December 31, 2018
Cash and cash equivalents	$ 252,657	$ 228,159
Restricted cash	103,768	154,599
Total cash, cash equivalents and restricted cash shown in the Condensed Consolidated Statements of Cash flows	$ 356,425	$ 382,758

See accompanying notes.

RealPage, Inc.

Notes to the Condensed Consolidated Financial Statements
(unaudited)

1. The Company

RealPage, Inc., a Delaware corporation (together with its subsidiaries, the "Company" or "we" or "us"), is a leading global provider of software and data analytics to the real estate industry. Our platform of data analytics and software solutions enables the rental real estate industry to manage property operations (such as marketing, pricing, screening, leasing, and accounting), identify opportunities through market intelligence, and obtain data-driven insight for better operational and financial decision-making. Our integrated, on demand platform provides a single point of access and a massive repository of real-time lease transaction data, including prospect, renter, and property data. By leveraging data as well as integrating and streamlining a wide range of complex processes and interactions among the rental real estate ecosystem (owners, managers, prospects, renters, service providers, and investors), our platform helps our clients improve financial and operational performance and prudently place and harvest capital.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited Condensed Consolidated Financial Statements and footnotes have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). The unaudited Condensed Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. We believe that the disclosures made are appropriate and conform to those rules and regulations, and that the condensed or omitted information is not misleading.

The unaudited Condensed Consolidated Financial Statements included herein reflect all adjustments (consisting of normal, recurring adjustments) which are, in the opinion of management, necessary to state fairly the results for the interim periods presented. All intercompany balances and transactions have been eliminated in consolidation. The results of operations for the interim periods presented are not necessarily indicative of the operating results to be expected for any subsequent interim period or for the fiscal year.

These financial statements should be read in conjunction with the financial statements and the notes thereto included in our Annual Report on Form 10-K filed with the SEC on February 27, 2019 ("Form 10-K").

Segment and Geographic Information

Our chief operating decision maker is our Chief Executive Officer, who reviews financial information presented on a company-wide basis. As a result, we determined that the Company has a single reporting segment and operating unit structure.

Principally, all of our revenue for thethree months ended March 31, 2019 and 2018 was earned in the United States. Net property, equipment, and software located in the United States amounted to $144.7 million and $144.3 million at March 31, 2019 and December 31, 2018, respectively. Net property, equipment, and software located in our international subsidiaries amounted to $9.3 million and $9.2 million at March 31, 2019 and December 31, 2018, respectively. Substantially all of the net property, equipment, and software held in our international subsidiaries was located in the Philippines, India, and Spain at both March 31, 2019 and December 31, 2018.

Concentrations of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist principally of cash and cash equivalents and accounts receivable. Our cash accounts are maintained at various high credit, quality financial institutions and may exceed federally insured limits. We have not experienced any losses in such accounts.

Substantially all of our accounts receivable are derived from clients in the residential rental housing market. Concentrations of credit risk with respect to accounts receivable and revenue are limited due to a large, diverse customer base. We do not require collateral from clients. We maintain an allowance for doubtful accounts based upon the expected collectability of accounts receivable.

No single client accounted for 10% or more of our revenue or accounts receivable for thethree months ended March 31, 2019 or 2018.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the amounts reported and disclosed in the financial statements and accompanying notes. Such significant estimates include, but are not limited to, the determination of the allowances against our accounts receivable; useful lives of intangible assets; impairment assessments on long-lived assets (including goodwill); contingent commissions related to the sale of insurance products; fair value of acquired net assets and contingent consideration in connection with business combinations; the nature and timing of satisfaction of performance obligations and related reserves; fair values of stock-based awards; loss contingencies; and the recognition, measurement and valuation of current and deferred income taxes. Actual results could differ from these estimates. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable, the result of which forms the basis for making judgments about the carrying value of assets and liabilities. For greater detail regarding these accounting policies and estimates, refer to our Form 10-K.

Cash and Cash Equivalents and Restricted Cash

We consider all highly liquid investments with an initial maturity of three months or less at the date of purchase to be cash equivalents. The fair value of our cash and cash equivalents approximates carrying value.

Restricted cash consists of cash collected from tenants that will be remitted primarily to our clients.

Accounts Receivable

Accounts receivable primarily represent trade receivables from clients recorded at the invoiced amount, net of allowances, which are based on our historical experience, the aging of our trade receivables, and management judgment.

Trade receivables are written off against the allowance when management determines a balance is uncollectible. During thethree months ended March 31, 2019 and 2018, we incurred bad debt expense of $1.1 million and $0.6 million, respectively.

Business Combinations

We allocate the fair value of the purchase consideration of our acquisitions to the tangible assets acquired, liabilities assumed, and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Purchase consideration includes assets transferred, liabilities assumed, and/or equity interests issued by us, all of which are measured at their fair value as of the date of acquisition. Our business combination transactions may be structured to include a combination of up-front, deferred and contingent payments to be made at specified dates subsequent to the date of acquisition. These payments may include a combination of cash and equity. Deferred and contingent payments are included in the purchase consideration based on their fair value as of the acquisition date. Deferred obligations are generally subject to adjustments specified in the underlying purchase agreement related to the seller's indemnification obligations. Contingent consideration is an obligation to make future payments to the seller contingent upon the achievement of future operational or financial targets. The fair value of these payments is estimated using a probability weighted discount model based on the achievement of the specified targets.

The valuation of the net assets acquired as well as certain elements of purchase consideration requires management to make significant estimates and assumptions, especially with respect to future expected cash flows, useful lives, and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable but which are inherently uncertain; and, as a result, actual results may differ from estimates. During the measurement period, we may record adjustments to the assets acquired and liabilities assumed with a corresponding offset to goodwill. Changes to the fair value of contingent payments is reflected in "General and administrative" expenses in the accompanying Condensed Consolidated Statements of Operations.

Acquisition costs are expensed as incurred and are included in "General and administrative" expenses in the accompanying Condensed Consolidated Statements of Operations. We include the results of operations from acquired businesses in our consolidated financial statements from the effective date of the acquisition.

Deferred Revenue

For several of our solutions, we invoice our clients in annual, monthly, or quarterly installments in advance of the commencement of the service period. Deferred revenue is recognized when billings are due or payments are received in advance of revenue recognition from our subscription and other services. Accordingly, the deferred revenue balance does not represent the total contract value of annual subscription agreements.

Revenue Recognition

Revenues are derived from on demand software solutions, professional services and other goods and services. We recognize revenue as we satisfy one or more service obligations under the terms of a contract, generally as control of goods and services are transferred to our clients. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. We include estimates of variable consideration in revenue to the extent that it is probable that a significant reversal of cumulative revenue will not occur. We estimate and accrue a reserve for credits and other adjustments as a reduction to revenue based on several factors, including past history.

On Demand Revenue

Our on demand revenue consists of license and subscription fees, transaction fees related to certain of our software-enabled value-added services, and commissions derived from our selling certain risk mitigation services.

We generally recognize revenue from subscription fees on a straight-line basis over the access period beginning on the date that we make our service available to the client. Our subscription agreements generally are non-cancellable, have an initial term of one year or longer and are billed either monthly, quarterly or annually in advance. Non-refundable upfront fees billed at the initial order date that are not associated with an upfront service obligation are recognized as revenue on a straight-line basis over the period in which the client is expected to benefit, which we consider to be three years.

We recognize revenue from transaction fees in the month the related services are performed based on the amount we have the right to invoice.

We offer risk mitigation services to our clients by acting as an insurance agent and derive commission revenue from the sale of insurance products to our clients' residents. The commissions are based upon a percentage of the premium that the insurance company charges to the policyholder and are subject to forfeiture in instances where a policyholder cancels prior to the end of the policy. Our contracts with our underwriting partners provide for contingent commissions to be paid to us in accordance with the agreements. Our estimate of contingent commission revenue considers the variable factors identified in the terms of the applicable agreement. We recognize commissions related to these services as earned ratably over the policy term and insurance commission receivable in "Accounts receivable, less allowances".

Professional and Other Revenue

Professional services and other revenues generally consist of the fees we receive for providing implementation and consulting services, submeter equipment and ongoing maintenance of our existing on premise licenses.

Professional services are billed either on a time and materials basis or on a fixed price basis, and revenue is recognized over time as we perform the obligation. Professional services are typically sold bundled in a contract with other on demand solutions but may be sold separately. Professional service contracts sold separately generally have terms of one year or less. For bundled arrangements, where we account for individual services as a separate performance obligation, the transaction price is allocated between separate services in the bundle based on their relative standalone selling prices.

Other revenues consist primarily of submeter equipment sales that include related installation services. Such sales are considered bundled, and revenue from these bundled sales is recognized in proportion to the number of installed units completed to date as compared to the total contracted number of units to be provided and installed. For all other equipment sales, we generally recognize revenue when control of the hardware has transferred to our client.

Revenue recognized for on premise software sales generally consists of annual maintenance renewals on existing term or perpetual license, which is recognized ratably over the service period.

Contracts with Multiple Performance Obligations

The majority of the contracts we enter into with clients, including multiple contracts entered into at or near the same time with the same client, require us to provide one or more on demand software solutions, professional services and may include equipment. For these contracts, we account for individual performance obligations separately: i) if they are distinct or ii) if the promised obligations represent a series of distinct services that are substantially the same and have the same pattern of transfer to the client. Once we determine the performance obligations, we determine the transaction price, which includes estimating the amount of variable consideration, if any, to be included in the transaction price. For contracts with multiple performance obligations, we allocate the transaction price to the separate performance obligations on a relative standalone selling price basis. The standalone selling prices of our service are estimated using a market assessment approach based on our overall pricing objectives taking into consideration market conditions and other factors including the number of solutions sold, client demographics and the number and types of users within our contracts.

Sales, value add, and other taxes we collect from clients and remit to governmental authorities are excluded from revenues.

Fair Value Measurements

We measure our derivative financial instruments and acquisition-related contingent consideration obligations at fair value at each reporting period using a fair value hierarchy. A financial instrument's classification within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Three levels of inputs may be used to measure fair value:

Level 1 - Inputs are quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs are quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable, and market-corroborated inputs which are derived principally from or corroborated by observable market data.

Level 3 - Inputs are derived from valuation techniques in which one or more of the significant inputs or value drivers are unobservable.

The categorization of an asset or liability is based on the inputs described above and does not necessarily correspond to our perceived risk of that asset or liability. Moreover, the methods used by us may produce a fair value calculation that is not indicative of the net realizable value or reflective of future fair values. Furthermore, although we believe our valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments and non-financial assets and liabilities could result in a different fair value measurement at the reporting date.

Certain financial instruments, which may include cash, cash equivalents, restricted cash, accounts receivable, accounts payable and accrued expenses are recorded at their carrying amounts, which approximates their fair values due to their short-term nature.

We hold an equity investment which does not have a readily determinable fair value. We measure this investment at cost less impairment, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments of the same issuer.

Recently Adopted Accounting Standards

Accounting Standards Update 2016-02

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The new guidance requires lessees to recognize assets and liabilities arising from all leases with a lease term of more than 12 months, including those classified as operating leases under previous accounting guidance. It also requires disclosure of key information about leasing arrangements to increase transparency and comparability among organizations.

We adopted ASU 2016-02 effective January 1, 2019 using the optional transition method provided for in ASU 2018-11, *Leases - Targeted Improvements,* which eliminated the requirement to restate amounts presented prior to January 1, 2019. We elected the practical expedients permitted under the transition guidance, which allowed us to adopt the guidance without reassessing whether arrangements contain leases, the lease classification and the determination of initial direct costs.

The adoption of ASC 842 resulted in the recognition of right-of-use ("ROU") assets and lease liabilities for operating leases of $73.9 million and $101.5 million, respectively at January 1, 2019 (the "Transition Date") which included reclassifying deferred rent, lease incentives, and favorable and unfavorable leases associated with our acquisitions as a component of the ROU asset. As of the Transition Date, we had insignificant finance leases.

We determine if an arrangement contains a lease at inception. Our ROU assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. For our real estate contracts with lease and non-lease components, we have elected to combine the lease and non-lease components as a single lease component. The implicit rate within our leases are generally not readily determinable, and we use our incremental borrowing rate at the lease commencement date to determine the present value of lease payments. The determination of our incremental borrowing rate requires judgment. We determine our incremental borrowing rate for each lease using our current borrowing rate, adjusted for various factors including collateralization and term to align with the terms of the lease.

We have elected not to recognize a lease liability or ROU asset for short-term leases, defined as those which have a term of twelve months or less.

Certain of our leases include options to extend the lease. An option to extend the lease is considered in connection with determining the ROU asset and lease liability when it is reasonably certain we will exercise that option. Subsequent to the Transition Date, we determined we were reasonably certain to renew the building lease for our corporate headquarters, and as a result, we reassessed the classification of the lease and determined the building lease met the criteria of a finance lease under ASC 842. As a result, an operating ROU asset and lease liability of $36.4 million and $58.6 million, respectively, were reclassified and remeasured to a finance ROU asset and lease liability of $58.2 million and $80.4 million, respectively.

See Note 6 for additional disclosures related to the impact of adopting the new lease standard

Accounting Standards Update 2017-12

In August 2017, the FASB issued ASU 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*, which expands an entity's ability to apply hedge accounting for nonfinancial and financial risk components and allows for a simplified approach for fair value hedging of interest rate risk. Certain of the amendments in this ASU as they relate to cash flow hedges, eliminate the requirement to separately record hedge ineffectiveness currently in earnings. Instead, the entire change in the fair value of the hedging instrument is recorded in Other Comprehensive Income ("OCI"), and amounts deferred in OCI will be reclassified to earnings in the same income statement line item in which the earnings effect of the hedged item is reported. Additionally, this ASU simplifies the hedge documentation and effectiveness assessment requirements under the previous guidance. This ASU must be applied on a modified retrospective basis through a cumulative effect adjustment to the opening balance of retained earnings as of the initial application date.

We adopted ASU 2017-12 effective January 1, 2019. As a result of our adoption, we now recognize the entire change in the fair value of our interest rate swaps in OCI. Similar to our treatment of the effective portion of a change in fair value, the ineffective portion is now reclassified into interest expense as interest payments are made on our variable rate debt.

Recently Issued Accounting Standards

In August 2018, the FASB issued ASU 2018-15, *Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract.* This ASU aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. ASU 2018-15 is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, and early adoption is permitted. The amendments in this update will be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. We are currently evaluating the impact of this ASU on our consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The amendments in this ASU replace the incurred loss impairment methodology in current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. ASU 2016-13 is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted in fiscal years beginning after December 15, 2018. The amendments in this ASU are to be applied through a cumulative-effect adjustment to retained earnings as of the first reporting period in which the ASU is effective. We are currently evaluating the impact of adopting ASU 2016-13 on our consolidated financial statements.

3. Acquisitions

2019 Acquisitions

No acquisitions were completed during the three months ended March 31, 2019.

2018 Acquisitions

We completed four acquisitions during fiscal year 2018. For the acquisitions in the table below, the estimated fair values of assets acquired and liabilities assumed are provisional. We expect to finalize the valuation of these assets and liabilities as soon as practicable, but no later than one year from the acquisition dates. The allocation of each purchase price, including effects of measurement period adjustments recorded as of March 31, 2019, is as follows:

	Date of Acquisition	Aggregate Purchase Price	Closing Cash Payment, Net of Cash Acquired	Net Tangible Assets Acquired (Liabilities Assumed)	Identified Intangible Assets	Goodwill Recognized
				(in thousands)		
ClickPay Services, Inc.	April 2018	$ 221,063	$ 138,983	$ (4,550)	$ 52,700	$ 172,913
Blu Trend, LLC	July 2018	$ 8,500	$ 8,500	$ 343	$ 4,270	$ 3,887
LeaseLabs, Inc.	September 2018	$ 112,892	$ 84,498	$ 1,188	$ 27,200	$ 84,504
Rentlytics, Inc.	October 2018	$ 55,391	$ 47,895	$ 726	$ 12,200	$ 42,465

Purchase consideration for LeaseLabs, Inc. included contingent consideration of up to $9.9 million based on the collection of acquisition date accounts receivable balances during the six-month period after the acquisition date. The fair value of the contingent consideration was $7.0 million on the date of acquisition. The final contingent consideration amount of $6.0 million was paid in April 2019. Refer to Note 13 for additional information regarding our contingent consideration obligation.

Deferred Obligations and Contingent Consideration Activity

The following table presents changes in the Company's deferred cash and stock obligations and contingent consideration for thethree months ended March 31, 2019 and the year ended December 31, 2018:

	Deferred Cash and Stock Obligations	Contingent Consideration	Total
		(in thousands)	
Balance at January 1, 2018	$ 47,016	$ 414	$ 47,430
Additions, net of fair value discount	36,313	7,000	43,313
Cash payments	(29,600)	(247)	(29,847)
Accretion expense	1,970	—	1,970
Change in fair value	—	(1,167)	(1,167)
Indemnification claims and other adjustments	(3,557)	—	(3,557)
Balance at December 31, 2018	52,142	6,000	58,142
Cash payments	(11,729)	—	(11,729)
Accretion expense	662	—	662
Indemnification claims and other adjustments	(3)	—	(3)
Balance at March 31, 2019	$ 41,072	$ 6,000	$ 47,072

In May 2019, in connection with our April 2018 acquisitions of NovelPay, LLC ("NovelPay") and ClickPay Services, Inc. (collectively with NovelPay, "ClickPay"), we issued an aggregate of 154,281 shares of our common stock to certain of the equity holders of ClickPay. These shares are subject to a holdback in respect of indemnification and post-closing purchase price adjustments pursuant to the acquisition agreements.

Pro Forma Results of Acquisitions

The following table presents unaudited pro forma results of operations for thethree months ended March 31, 2018, as if the aforementioned 2018 acquisitions had occurred as of January 1, 2017. The pro forma information includes the business combination accounting effects resulting from these acquisitions, including interest expense, tax expense or benefit, issuance of shares of our common stock, and additional amortization resulting from the valuation of amortizable intangible assets. We prepared the pro forma financial information for the combined entities for comparative purposes only, and it is not indicative of what actual results would have been if the acquisitions had occurred at the beginning of the periods presented, or of future results.

	Three Months Ended March 31, 2018 Pro Forma
	(unaudited)
	(in thousands, except per share amounts)
Total revenue	$ 216,151
Net income	$ 7,888
Net income per share:	
Basic	$ 0.10
Diluted	$ 0.09

No pro forma results of operations are presented for thethree months ended March 31, 2019, as no acquisitions were completed during the first quarter of2019.

4. Revenue Recognition

Disaggregation of Revenue

The following table presents our revenues disaggregated by major revenue source. Sales and usage-based taxes are excluded from revenues.

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
On demand		
Property management	$ 49,914	$ 45,319
Resident services	96,804	77,177
Leasing and marketing	44,270	39,416
Asset optimization	35,531	31,388
Total on demand revenue	226,519	193,300
Professional and other	7,787	8,001
Total revenue	$ 234,306	$ 201,301

On Demand Revenue

We generate the majority of our on demand revenue by licensing software-as-a-service (“SaaS”) solutions to our clients on a subscription basis. Our SaaS solutions are provided pursuant to contractual commitments that typically include a promise that we will stand ready, on a monthly basis, to deliver access to our technology platform over defined service delivery periods. These solutions represent a series of distinct services that are substantially the same and have the same pattern of transfer to the client. Revenue from our SaaS solutions is generally recognized ratably over the term of the arrangement.

Consideration for our on demand subscription services consist of fixed, variable and usage-based fees. We invoice a portion of our fees at the initial order date and then monthly or annually thereafter. Subscription fees are generally fixed based on the number of sites and the level of services selected by the client.

We sell certain usage-based services, primarily within our property management, resident services andleasing and marketing solutions, to clients based on a fixed rate per transaction. Revenues are calculated based on the number of transactions processed monthly and will vary from month to month based on actual usage of these transaction-based services over the contract term, which is typically one year in duration. The fees for usage-based services are not associated with every distinct service promised in the series of distinct services we provide our clients. As a result, we allocate variable usage-based fees only to the related transactions and recognize them in the month that usage occurs.

As part of our resident services offerings, we offer risk mitigation services to our clients by acting as an insurance agent and derive commission revenue from the sale of insurance products to our clients’ residents. The commissions are based upon a percentage of the premium that the insurance company underwriting partners charge to the policyholder and are subject to forfeiture in instances where a policyholder cancels prior to the end of the policy. The overall insurance services we provide represent a single performance obligation that qualifies as a separate series in accordance with the new revenue standard. Our contracts with our underwriting partners also provide for contingent commissions to be paid to us in accordance with the agreements. The contingent commissions are not associated with every distinct service promised in the series of distinct insurance services we provide. We generally accrue and recognize contingent commissions monthly based on estimates of the variable factors identified in the terms of the applicable agreements.

Professional Services and Other Revenues

Professional services and other revenues generally consist of the fees we receive for providing implementation and consulting services, submeter equipment and ongoing maintenance of our existing on premise licenses.

Professional services revenues primarily consist of fees for implementation services, consulting services and training. Professional services are billed either on a fixed rate per hour (time) and materials basis or on a fixed price basis. Professional services are typically sold bundled in a contract with other on demand solutions but may be sold separately. For bundled arrangements, we allocate the transaction price to separate services based on their relative standalone selling prices if a service is separately identifiable from other items in the bundled arrangement and if a client can benefit from it on its own or with other resources readily available to the client.

Other revenues consist of submeter equipment sales that include related installation services, sales of other equipment and on premise software sales. Submeter hardware and installation services are considered to be part of a single performance obligation due to the significance of the integration and interdependency of the installation services with the meter equipment. Our typical payment terms for submeter installations require a percentage of the overall transaction price to be paid upfront, with the remainder billed as progress payments. We recognize submeter revenue in proportion to the number of fully installed units completed to date as compared to the total contracted number of units to be provided and installed. For all other equipment sales, we generally recognize revenue when control of the hardware has transferred to our client, which occurs at a point in time, typically upon delivery to the client.

The majority of on premise revenue consists of maintenance renewals from clients who renew for an additional one-year term. Maintenance renewal revenue is recognized ratably over the service period based upon the standalone selling price of that service obligation.

Contract Balances

Contract assets generally consist of amounts recognized as revenue before they can be invoiced to clients or amounts invoiced to clients prior to the period in which the service is provided where the right to payment is subject to conditions other than just the passage of time. These contract assets are included in "Accounts receivable" in the accompanying Condensed Consolidated Financial Statements and related disclosures. Contract liabilities are comprised of billings or payments received from our clients in advance of performance under the contract. We refer to these contract liabilities as "Deferred revenue" in the accompanying Condensed Consolidated Financial Statements and related disclosures. We recognized $74.1 million of revenue during the three months ended March 31, 2019, which was included in the line "Deferred revenue" in the accompanying Condensed Consolidated Balance Sheet as of the beginning of the period.

Contract Acquisition Costs

We capitalize certain commissions as incremental costs of obtaining a contract with a client if we expect to recover those costs. The commissions are capitalized and amortized over a period of benefit determined to be three years. Below is a summary of our capitalized commissions costs and their respective locations in the accompanying Condensed Consolidated Balance Sheets:

	Balance Sheet Location	March 31, 2019	December 31, 2018
		(in thousands)	
Capitalized commissions costs - current	Other current assets	$ 7,761	$ 6,679
Capitalized commissions costs - noncurrent	Other assets	8,216	7,757
Total capitalized commissions costs		$ 15,977	$ 14,436

During the three months ended March 31, 2019 and 2018, we amortized commission costs totaling $1.8 million and $0.8 million, respectively. No impairment loss was recognized in relation to these capitalized costs.

Remaining Performance Obligations

Certain clients commit to purchase our solutions for terms ranging from two to seven years.We expect to recognize approximately $424.8 million of revenue in the future related to performance obligations for on demand contracts with an original duration greater than one year that were unsatisfied or partially unsatisfied as of March 31, 2019. Our estimate does not include amounts related to:

- professional and usage-based services that are billed and recognized based on services performed in a certain period;
- amounts attributable to unexercised contract renewals that represent a material right; or
- amounts attributable to unexercised client options to purchase services that do not represent a material right.

We expect to recognize revenue on approximately 68.6% of the remaining performance obligations over the next 24 months, with the remainder recognized thereafter. Revenue from remaining performance obligations for professional service contracts as of March 31, 2019 was immaterial.

5. Property, Equipment, and Software

Property, equipment, and software consisted of the following at March 31, 2019 and December 31, 2018:

	March 31, 2019	December 31, 2018
	(in thousands)	
Leasehold improvements	$ 64,135	$ 63,391
Data processing and communications equipment	71,197	68,015
Furniture, fixtures, and other equipment	34,057	33,840
Software	137,907	131,437
Property, equipment, and software, gross	307,296	296,683
Less: Accumulated depreciation and amortization	(153,340)	(143,155)
Property, equipment, and software, net	$ 153,956	$ 153,528

Depreciation and amortization expense for property, equipment, and purchased software was $7.5 million and $6.9 million for the three months ended March 31, 2019 and 2018, respectively.

The unamortized amount of capitalized software development costs was $57.1 million and $54.9 million at March 31, 2019 and December 31, 2018, respectively. Amortization expense related to capitalized software development costs totaled $3.2 million and $2.6 million for the three months ended March 31, 2019 and 2018, respectively.

6. Leases

We adopted ASU 2016-02 effective January 1, 2019 using the modified retrospective approach. Prior period amounts have not been adjusted and continue to be reported in accordance with our historic accounting under ASC Topic 840. Our leases are primarily comprised of real estate leases of office facilities and equipment under operating leases that expire on various dates through 2033. In May 2015, we entered into a lease agreement for office space located in Richardson, Texas to serve as our corporate headquarters and data center. The lease is for a term of twelve years, beginning in 2016, and includes optional extension periods. The lease agreement contains provisions for rent escalations over the term of the lease and leasehold improvement incentives.

The components of lease costs for the three months ended March 31, 2019 were as follows, in thousands:

Operating lease cost	$ 3,486
Finance lease cost:	
Depreciation of finance lease asset	$ 992
Interest on lease liabilities	1,045
Total finance lease cost	$ 2,037

Rent expense for short-term leases in the first quarter of 2019 was not material.

Supplemental balance sheet information related to leases atMarch 31, 2019, was as follows:

	Operating leases	Finance leases	Total leases
	(in thousands, except lease term and discount rate)		
Right-of-use assets	$ 33,806	$ 57,217	$ 91,023
Lease liabilities, current [(1)]	$ 10,492	$ 3,115	$ 13,607
Lease liabilities, net of current portion	29,283	76,512	105,795
Total lease liabilities	$ 39,775	$ 79,627	$ 119,402
Weighted average remaining term (in years)	5.4	14.4	
Weighted average discount rate	5.2%	5.4%	

(1) Included in the line “Accrued expenses and other current liabilities” in the accompanying Condensed Consolidated Balance Sheets.

Supplemental cash flow information related to leases for the three months endedMarch 31, 2019, was as follows, in thousands:

Cash payments for lease liabilities within operating activities:	
Operating leases	$ 3,658
Finance leases	$ 1,045

At March 31, 2019, future maturities of lease liabilities due under these lease agreements were as follows for the years ending December 31, in thousands:

	Operating leases	Finance leases	Total leases
2019	$ 12,240	$ 7,325	$ 19,565
2020	7,905	7,425	15,330
2021	6,873	7,530	14,403
2022	5,668	7,635	13,303
2023	5,126	7,740	12,866
Thereafter	8,009	78,087	86,096
Total undiscounted lease payments	45,821	115,742	161,563
Present value adjustment	(6,046)	(36,115)	(42,161)
Present value of lease payments	$ 39,775	$ 79,627	$ 119,402

7. Goodwill and Intangible Assets

Changes in the carrying amount of goodwill during thethree months ended March 31, 2019 were as follows, in thousands:

Balance as of January 1, 2019	$ 1,053,119
Measurement period adjustments	(394)
Balance as of March 31, 2019	$ 1,052,725

Identified intangible assets consisted of the following at March 31, 2019 and December 31, 2018:

	March 31, 2019			December 31, 2018		
	Carrying Amount	Accumulated Amortization	Net	Carrying Amount	Accumulated Amortization	Net
	(in thousands)					
Finite-lived intangible assets:						
Developed technologies	$ 207,638	$ (106,675)	$ 100,963	$ 207,310	$ (100,445)	$ 106,865
Client relationships	264,228	(115,052)	149,176	264,228	(107,155)	157,073
Vendor relationships	5,650	(5,650)	—	5,650	(5,650)	—
Trade names	22,956	(12,423)	10,533	22,956	(10,682)	12,274
Non-compete agreements	4,173	(1,593)	2,580	4,173	(1,395)	2,778
Total finite-lived intangible assets	504,645	(241,393)	263,252	504,317	(225,327)	278,990
Indefinite-lived intangible assets:						
Trade names	8,390	—	8,390	8,388	—	8,388
Total intangible assets	$ 513,035	$ (241,393)	$ 271,642	$ 512,705	$ (225,327)	$ 287,378

Amortization expense related to finite-lived intangible assets was $16.1 million and $13.8 million for the three months ended March 31, 2019 and 2018, respectively.

8. Debt

Credit Facility

On September 30, 2014, we entered into an agreement for a secured credit facility to refinance our outstanding revolving loans. The credit facility agreement was subsequently amended during 2016, 2017, and 2018 (inclusive of these amendments, the "Credit Facility"). For more information regarding these amendments, refer to our 2017 and 2018 Form 10-K. The Credit Facility matures on February 27, 2022, and includes the following:

Revolving Facility: The Credit Facility provides $350.0 million in aggregate commitments for revolving loans, with sublimits of $10.0 million for the issuance of letters of credit and $20.0 million for swingline loans ("Revolving Facility").

Term Loan: In February 2016, we originated a term loan in the original principal amount of $125.0 million under the Credit Facility ("Term Loan"). We made quarterly principal payments of $0.8 million through March 31, 2018, which increased to $1.5 million beginning on June 30, 2018, and will increase again to $3.1 million beginning on June 30, 2020.

Delayed Draw Term Loan: In December 2017, we drew funds of $200.0 million available under the delayed draw term loan ("Delayed Draw Term Loan"). Subsequent to disbursal of the Delayed Draw Term Loan funds, we began making quarterly principal payments on the Delayed Draw Term Loan equal to an initial amount of $1.3 million through March 31, 2018. The quarterly principal payments increased to $2.5 million beginning on June 30, 2018, and will increase again to $5.0 million beginning on June 30, 2020.

Revolving loans under the Credit Facility may be voluntarily prepaid and re-borrowed. Principal payments on the Term Loan and Delayed Draw Term Loan (collectively, the "Term Loans") are due in quarterly installments, as described above, and may not be re-borrowed. All outstanding principal and accrued but unpaid interest is due on the maturity date. The Term Loans are subject to mandatory repayment requirements in the event of certain asset sales or if certain insurance or condemnation events occur, subject to customary reinvestment provisions. We may prepay the Term Loans in whole or in part at any time, without premium or penalty.

Accordion Feature: The Credit Facility also allows us, subject to certain conditions, to request additional term loans or revolving commitments up to an aggregate principal amount of $150.0 million, plus an amount that would not cause our Senior Leverage Ratio, as defined below, to exceed 3.50 to 1.00.

At our option, amounts outstanding under the Credit Facility accrue interest at a per annum rate equal to either LIBOR, plus a margin ranging from 1.25% to 2.25%, or the Base Rate, plus a margin ranging from 0.25% to 1.25% ("Applicable Margin"). The base LIBOR is, at our discretion, equal to either one, two, three, or six month LIBOR. The Base Rate is defined as the greater of Wells Fargo's prime rate, the Federal Funds Rate plus 0.50%, or one month LIBOR plus 1.00%. In each case, the Applicable Margin is determined based upon our Net Leverage Ratio, as defined below. Accrued interest on amounts outstanding under the Credit Facility is due and payable quarterly, in arrears, for loans bearing interest at the Base Rate and at the end of the applicable interest period in the case of loans bearing interest at the adjusted LIBOR.

Certain of our existing and future material domestic subsidiaries are required to guarantee our obligations under the Credit Facility, and the obligations under the Credit Facility are secured by substantially all of our assets and the assets of the subsidiary guarantors. The Credit Facility contains customary covenants, subject in each case to customary exceptions and qualifications, which limit our and certain of our subsidiaries' ability to, among other things, incur additional indebtedness or guarantee indebtedness of others; grant liens on our assets; enter into mergers or consolidations; dispose of assets; prepay certain indebtedness; make changes to our governing documents and certain of our agreements; pay dividends and make other distributions on our capital stock and redeem and repurchase our capital stock; make investments, including acquisitions; and enter into transactions with affiliates. Our covenants also include requirements that we comply with the following financial ratios:

Consolidated Net Leverage Ratio: The Consolidated Net Leverage Ratio ("Net Leverage Ratio"), defined as a ratio of consolidated funded indebtedness, as defined in the Credit Facility, on the last day of each fiscal quarter to the sum of the four previous consecutive fiscal quarters' consolidated EBITDA, as defined in the Credit Facility, of no greater than 5.00 to 1.00.

Consolidated Interest Coverage Ratio: The Consolidated Interest Coverage Ratio ("Interest Coverage Ratio"), defined as a ratio of the sum of the four previous fiscal quarters' consolidated EBITDA to our interest expense for the same period, excluding non-cash interest attributable to the Convertible Notes, as defined below, of no less than 3.00 to 1.00.

Consolidated Senior Secured Net Leverage Ratio: The Consolidated Senior Secured Net Leverage Ratio ("Senior Leverage Ratio"), defined as a ratio of consolidated senior secured indebtedness, as defined in the Credit Facility, on the last day of each fiscal quarter to the sum of the four previous consecutive fiscal quarters' consolidated EBITDA, of no greater than 3.75 to 1.00.

As of March 31, 2019, we were in compliance with the covenants under our Credit Facility.

The Credit Facility contains customary events of default, subject to customary cure periods for certain defaults. In the event of a default, the obligations under the Credit Facility could be accelerated, the applicable interest rate could be increased, the loan commitments could be terminated, our subsidiary guarantors could be required to pay the obligations in full and our lenders would be permitted to exercise remedies with respect to all of the collateral that is securing the Credit Facility. Any such default that is not cured or waived could have a material adverse effect on our liquidity and financial condition.

As of March 31, 2019 and December 31, 2018, we had $350.0 million of available credit under our Revolving Facility and there were no outstanding borrowings. We incur commitment fees on the unused portion of the Revolving Facility. The carrying value of the Revolving Facility approximates its fair value.

Unamortized debt issuance costs for the Revolving Facility were $1.2 million and $1.3 million at March 31, 2019 and December 31, 2018, respectively, and are included in the line "Other assets" in the Condensed Consolidated Balance Sheets.

Principal outstanding, and unamortized debt issuance costs for the Term Loans, were as follows at March 31, 2019 and December 31, 2018:

	March 31, 2019		December 31, 2018	
	Term Loan	Delayed Draw Term Loan	Term Loan	Delayed Draw Term Loan
	(in thousands)			
Principal outstanding	$ 113,457	$ 187,500	$ 114,990	$ 190,000
Unamortized issuance costs	(157)	(553)	(171)	(606)
Unamortized discount	(125)	(330)	(137)	(361)
Carrying value	$ 113,175	$ 186,617	$ 114,682	$ 189,033

The fair value of the Term Loans on March 31, 2019 and December 31, 2018 was $294.3 million and $298.9 million, respectively. The fair value was estimated by discounting future cash flows using prevailing market interest rates on debt with similar creditworthiness, terms, and maturities. We concluded that this fair value measurement should be categorized within Level 2.

Future maturities of principal under the Term Loans are as follows for the years ending December 31, in thousands:

	Term Loans
2019	$ 12,100
2020	28,232
2021	32,266
2022	228,359
	$ 300,957

Convertible Notes

In May 2017, we issued convertible senior notes with aggregate principal of $345.0 million (including the underwriters' exercise in full of their over-allotment option of $45.0 million) which mature on November 15, 2022 ("Convertible Notes"). The Convertible Notes were issued under an indenture dated May 23, 2017 ("Indenture"), by and between us and Wells Fargo Bank, N.A., as Trustee. We received net proceeds from the offering of approximately $304.2 million after adjusting for debt issuance costs, including the underwriting discount, the net cash used to purchase the Note Hedges and the proceeds from the issuance of the Warrants which are discussed below.

The Convertible Notes accrue interest at a rate of 1.50%, payable semi-annually on May 15 and November 15 of each year. On or after May 15, 2022, and until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their Convertible Notes at their option. The Convertible Notes are convertible at an initial rate of 23.84 shares per $1,000 of principal (equivalent to an initial conversion price of approximately $41.95 per share of our common stock). The conversion rate is subject to customary adjustments for certain events as described in the Indenture. Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. It is our current intent to settle conversions of the Convertible Notes through combination settlement, which involves repayment of the principal portion in cash and any excess of the conversion value over the principal amount in shares of our common stock. Based on our closing stock price of $60.69 on March 31, 2019, the if-converted value exceeded the aggregate principal amount of the Convertible Notes by $154.1 million.

Holders may convert their Convertible Notes, at their option, prior to May 15, 2022 only under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending on June 30, 2017 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;
- during the five business day period after any five consecutive trading day period (the "Measurement Period") in which the trading price per $1,000 principal amount of the Convertible Notes for each trading day of the Measurement Period was less than 98% of the product of the last reported sales price of our common stock and the conversion rate on each such trading day; or
- upon the occurrence of specified corporate events, as defined in the Indenture.

We may not redeem the Convertible Notes prior to their maturity date, and no sinking fund is provided for them. If we undergo a fundamental change, as described in the Indenture, subject to certain conditions, holders may require us to repurchase for cash all or any portion of their Convertible Notes. The fundamental change repurchase price is equal to 100% of the principal amount of the Convertible Notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date. If holders elect to convert their Convertible Notes in connection with a make-whole fundamental change, as described in the Indenture, we will, to the extent provided in the Indenture, increase the conversion rate applicable to the Convertible Notes.

The Convertible Notes are senior unsecured obligations and rank senior in right of payment to any of our indebtedness that is expressly subordinated in right of payment to the Convertible Notes and equal in right of payment to any of our existing and future unsecured indebtedness that is not subordinated. The Convertible Notes are effectively junior in right of payment to any of our secured indebtedness (to the extent of the value of assets securing such indebtedness) and structurally junior to all existing and future indebtedness and other liabilities, including trade payables, of our subsidiaries. The Indenture does not limit the amount of debt that we or our subsidiaries may incur. The Convertible Notes are not guaranteed by any of our subsidiaries.

The Indenture does not contain any financial or operating covenants or restrictions on the payments of dividends, the incurrence of indebtedness, or the issuance or repurchase of securities by us or any of our subsidiaries. The Indenture contains customary events of default with respect to the Convertible Notes and provides that upon certain events of default occurring and continuing, the Trustee may, and the Trustee at the request of holders of at least 25% in principal amount of the Convertible Notes shall, declare all of principal and accrued and unpaid interest, if any, of the Convertible Notes to be due and payable. In case of certain events of bankruptcy, insolvency or reorganization, involving us or a significant subsidiary, all of the principal of and accrued and unpaid interest on the Convertible Notes will automatically become due and payable.

In accounting for the issuance of the Convertible Notes, we separated the Convertible Notes into liability and equity components. We allocated $282.5 million of the Convertible Notes to the liability component, and $62.5 million to the equity component. The excess of the principal amount of the liability component over its carrying amount is amortized to interest expense over the term of the Convertible Notes using the effective interest method. The equity component will not be remeasured as long as it continues to meet the conditions for equity classification.

We incurred issuance costs of $9.8 million related to the Convertible Notes. Issuance costs were allocated to the liability and equity components based on their relative values. Issuance costs attributable to the liability component are being amortized to interest expense over the term of the Convertible Notes, and issuance costs attributable to the equity component are included along with the equity component in stockholders' equity.

During the first quarter of 2019, the closing price of our common stock exceeded 130% of the conversion price of the Convertible Notes for more than 20 trading days during the last 30 consecutive trading days of the quarter, thereby satisfying one of the early conversion events. As a result, the Convertible Notes are convertible at any time during the second quarter of 2019.

Accordingly, as of March 31, 2019, the carrying amount of the Convertible Notes of $295.9 million was classified as a current liability in the accompanying Condensed Consolidated Balance Sheets. No gain or loss was recognized when the debt became convertible.

The net carrying amount of the Convertible Notes at March 31, 2019 and December 31, 2018, was as follows:

	March 31, 2019	December 31, 2018
	(in thousands)	
Liability component:		
Principal amount	$ 345,000	$ 345,000
Unamortized discount	(43,559)	(46,235)
Unamortized debt issuance costs	(5,579)	(5,922)
	$ 295,862	$ 292,843
Equity component, net of issuance costs and deferred tax:	$ 61,390	$ 61,390

The estimated fair value of the Convertible Notes at March 31, 2019 and December 31, 2018 was $532.6 million and $441.4 million, respectively. The estimated fair value is based on quoted market prices as of the last trading day for the three months ended March 31, 2019; however, the Convertible Notes have only a limited trading volume and as such this fair value estimate is not necessarily the value at which the Convertible Notes could be retired or transferred. We concluded this measurement should be classified within Level 2.

The following table sets forth total interest expense related to the Convertible Notes for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
Contractual interest expense	$ 1,294	$ 1,294
Amortization of debt discount	2,676	2,524
Amortization of debt issuance costs	343	323
	$ 4,313	$ 4,141

The effective interest rate of the liability component for the three months ended March 31, 2019 and 2018 was 5.87%.

Convertible Note Hedges and Warrants

On May 23, 2017, we entered into privately negotiated transactions to purchase hedge instruments ("Note Hedges"), covering approximately 8.2 million shares of our common stock at a cost of $62.5 million. The Note Hedges are subject to anti-dilution provisions substantially similar to those of the Convertible Notes, have a strike price of approximately$41.95 per share, are exercisable by us upon any conversion under the Convertible Notes, and expire on November 15, 2022.

The Note Hedges are generally expected to reduce the potential dilution to our common stock (or, in the event the conversion is settled in cash, to reduce our cash payment obligation) in the event that at the time of conversion our stock price exceeds the conversion price under the Convertible Notes. The cost of the Note Hedges is expected to be tax deductible as an original issue discount over the life of the Convertible Notes, as the Convertible Notes and the Note Hedges represent an integrated debt instrument for tax purposes. The cost of the Note Hedges was recorded as a reduction of our additional paid-in capital in the accompanying Condensed Consolidated Financial Statements.

On May 23, 2017, we also sold warrants for the purchase of up to8.2 million shares of our common stock for aggregate proceeds of$31.5 million (“Warrants”). The Warrants have a strike price of $57.58 per share and are subject to customary anti-dilution provisions. The Warrants will expire in ratable portions on a series of expiration dates commencing on February 15, 2023. The proceeds from the issuance of the Warrants were recorded as an increase to our additional paid-in capital in the accompanying Condensed Consolidated Financial Statements.

The Note Hedges are transactions that are separate from the terms of the Convertible Notes and the Warrants, and holders of the Convertible Notes and the Warrants have no rights with respect to the Note Hedges. The Warrants are similarly separate in both terms and rights from the Note Hedges and the Convertible Notes.

9. Stock-based Expense

During the three months ended March 31, 2019, we made the following grants of time-based restricted stock:

Three Months Ended March 31, 2019	Vesting
637,887	Shares vest ratably over a period of twelve quarters beginning on the first day of the second calendar quarter immediately following the grant date.
22,675	Shares fully vested on the first day of the calendar quarter immediately following the grant date.
1,380	Shares vest ratably over a period of four quarters beginning on the first day of the calendar quarter immediately following the grant date.

During the three months ended March 31, 2019, we granted 468,132 shares of restricted stock that become eligible to vest based on the achievement of certain market-based conditions, as described below:

Three Months Ended March 31, 2019	Condition to Become Eligible to Vest
11,300	After the grant date and prior to July 1, 2022, the average closing price per share of our common stock equals or exceeds $60.84 for twenty consecutive trading days.
105,733	After the grant date and prior to July 1, 2022, the average closing price per share of our common stock equals or exceeds $60.89 for twenty consecutive trading days.
11,300	After the grant date and prior to July 1, 2022, the average closing price per share of our common stock equals or exceeds $66.92 for twenty consecutive trading days.
105,733	After the grant date and prior to July 1, 2022, the average closing price per share of our common stock equals or exceeds $66.98 for twenty consecutive trading days.
11,300	After the grant date and prior to July 1, 2022, the average closing price per share of our common stock equals or exceeds $73.01 for twenty consecutive trading days.
105,733	After the grant date and prior to July 1, 2022, the average closing price per share of our common stock equals or exceeds $73.07 for twenty consecutive trading days.
11,300	After the grant date and prior to July 1, 2022, the average closing price per share of our common stock equals or exceeds $85.17 for twenty consecutive trading days.
105,733	After the grant date and prior to July 1, 2022, the average closing price per share of our common stock equals or exceeds $85.24 for twenty consecutive trading days.

Shares that become eligible to vest, if any, become Eligible Shares. These awards vest ratably over four calendar quarters beginning on the first day of the next calendar quarter immediately following the date on which they become Eligible Shares. Vesting is conditional upon the recipient remaining a service provider, as defined in the plan document, to the Company through each applicable vesting date.

Grants of restricted stock may be fulfilled through the issuance of previously authorized but unissued common stock shares, or the reissuance of shares held in treasury. All awards were granted under the Amended and Restated 2010 Equity Incentive Plan.

We capitalized stock-based expense for software development costs of $0.3 million and $0.2 million for the three months ended March 31, 2019 and 2018, respectively.

10. Commitments and Contingencies

Guarantor Arrangements

We have agreements whereby we indemnify our officers and directors for certain events or occurrences while the officer or director is or was serving at our request in such capacity. The term of the indemnification period is for the officer or director's lifetime. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited; however, we have a director and officer insurance policy that limits our exposure and enables us to recover a portion of any future amounts paid. As a result of our insurance policy coverage, we believe the estimated fair value of these indemnification agreements is minimal. Accordingly, we had no liabilities recorded for these agreements as of March 31, 2019 or December 31, 2018.

In the ordinary course of our business, we include standard indemnification provisions in our agreements with clients. Pursuant to these provisions, we indemnify our clients for losses suffered or incurred in connection with third-party claims that our products infringed upon any U.S. patent, copyright, trademark, or other intellectual property right. Where applicable, we generally limit such infringement indemnities to those claims directed solely to our products and not in combination with other software or products. With respect to our products, we also generally reserve the right to resolve any such claims by designing a non-infringing alternative, by obtaining a license on reasonable terms, or by terminating our relationship with the client and refunding the client's fees.

The potential amount of future payments to defend lawsuits or settle indemnified claims under these indemnification provisions is unlimited in certain agreements; however, we believe the estimated fair value of these indemnification provisions is minimal, and, accordingly, we had no liabilities recorded for these agreements as of March 31, 2019 or December 31, 2018.

Litigation

From time to time, in the normal course of our business, we are a party to litigation matters and claims. Litigation can be expensive and disruptive to our normal business operations. Moreover, the results of complex legal proceedings are difficult to predict, and our view of these matters may change in the future as the litigation and events related thereto unfold. We expense legal fees as incurred. Insurance recoveries associated with legal costs incurred are recorded when they are deemed probable of recovery.

At March 31, 2019 and December 31, 2018, we had accrued amounts for estimated settlement losses related to legal matters. We do not believe there is a reasonable possibility that a material loss exceeding amounts already recognized may have been incurred as of the date of the balance sheets presented herein.

We are involved in other litigation matters, including purported class action lawsuits that are not likely to be material either individually or in the aggregate based on information available at this time. Our view of these matters may change as the litigation and events related thereto unfold.

Other Matters

During May 2018 and as disclosed in our Form 10-K for the year ended December 31, 2018, we were the subject of a targeted email phishing campaign that led to a business email compromise, pursuant to which an unauthorized party gained access to an external third party system used by a subsidiary that we acquired in 2017. The incident resulted in the diversion of approximately $6.0 million, net of recovered funds, intended for disbursement to three clients. We immediately restored all funds to the client accounts.

We maintain insurance coverage to limit our losses related to criminal and network security events. During January 2019, we received approximately $1.0 million from our primary insurance carrier as a partial repayment toward our losses from the business email compromise. We intend to vigorously pursue repayment of the remaining losses under such insurance coverage. Due to the uncertainty regarding timing and full collectability of the loss, we recorded an allowance of $5.0 million for the remaining amount of the loss during the fourth quarter of 2018.

11. Net Income per Share

Basic net income per share is computed by dividing net income by the weighted average number of common shares outstanding during the period. Diluted net income per share is computed by using the weighted average number of common shares outstanding, after giving effect to all potential dilutive common shares outstanding during the period. Included within diluted net income per share is the dilutive effect of outstanding stock options and restricted stock using the treasury stock method. Weighted average shares from common share equivalents in the amount of 443,489 and 659,745 for the three months ended March 31, 2019 and 2018, respectively, were excluded from the dilutive shares outstanding because their effect was anti-dilutive.

For purposes of considering the Convertible Notes in determining diluted net income per share, it is our current intent to settle conversions of the Convertible Notes through combination settlement, which involves repayment of the principal portion in cash and any excess of the conversion value over the principal amount (the "conversion premium") in shares of our common stock. Therefore, only the impact of the conversion premium is included in total dilutive weighted average shares outstanding using the treasury stock method. The dilutive effect of the conversion premium for the three months ended March 31, 2019 and 2018 are shown in the table below.

The Warrants sold in connection with the issuance of the Convertible Notes are considered to be dilutive when the average price of our common stock during the period exceeds the Warrants' strike price of $57.58 per share, as described in Note 8. The effect of the additional shares that may be issued upon exercise of the Warrants is included in total dilutive weighted average shares outstanding using the treasury stock method and, to the extent dilutive, is shown in the table below. The Note Hedges purchased in connection with the issuance of the Convertible Notes are considered to be anti-dilutive and therefore do not impact our calculation of diluted net income per share. Refer to Note 8 for further discussion regarding the Convertible Notes.

We exclude common shares subject to a holdback pursuant to business combinations from the calculation of basic weighted average shares outstanding where the release of such shares is contingent upon an event not solely subject to the passage of time. As of March 31, 2019, there were approximately 196,000 contingently returnable shares related to our acquisitions of ClickPay and BluTrend, which were excluded from the computation of basic net income per share as these shares are subject to sellers' indemnification obligations and are subject to a holdback. There were no contingently returnable shares as of March 31, 2018. Dilutive common shares outstanding include the weighted average contingently issuable shares discussed above that are subject to a holdback, as well as the weighted average contingently issuable shares to be issued subject to a holdback on the first anniversary dates of the ClickPay and BluTrend acquisitions. These shares are subject to release to the sellers on the first and second anniversary date of the acquisitions which are contingent on the sellers' indemnification obligations.

The following table presents the calculation of basic and diluted net income per share:

	Three Months Ended March 31,	
	2019	2018
	(in thousands, except per share amounts)	
Numerator:		
Net income	$ 11,272	$ 10,901
Denominator:		
Basic:		
Weighted average common shares used in computing basic net income per share	91,490	81,166
Diluted:		
Add weighted average effect of dilutive securities:		
Stock options and restricted stock	1,509	2,332
Convertible Notes	2,207	1,319
Contingently issuable shares in connection with our acquisitions	355	—
Weighted average common shares used in computing diluted net income per share	95,561	84,817
Net income per share:		
Basic	$ 0.12	$ 0.13
Diluted	$ 0.12	$ 0.13

12. Income Taxes

We make estimates and judgments in determining our provision for income taxes for financial statement purposes. These estimates and judgments occur in the calculation of certain tax assets and liabilities that arise from differences in the timing of recognition of revenue and expense for tax and financial statement purposes.

Our provision for income taxes in interim periods is based on our estimated annual effective tax rate. We record cumulative adjustments in the quarter in which a change in the estimated annual effective rate is determined. The estimated annual effective tax rate calculation does not include the effect of discrete events that may occur during the year. The effect of these events, if any, is recorded in the quarter in which the event occurs.

Our effective income tax rate was29.2% and (2.8)% for the three months ended March 31, 2019 and 2018, respectively. Our effective rate is higher than the statutory rate for the three months ended March 31, 2019, primarily because of the effect of the base erosion and anti-abuse tax ("the BEAT tax"), state taxes and certain non-deductible expenses, offset, in part, by $1.7 million of excess tax benefits from stock-based compensation recognized as discrete items as required by ASU 2016-09.

Our effective rate is lower than the statutory rate for thethree months ended March 31, 2018, primarily because of$4.2 million of excess tax benefits from stock-based compensation recognized as discrete items, as required by ASU 2016-09.

13. Fair Value Measurements

Assets and liabilities measured at fair value on a recurring basis:

Interest rate swap agreements: The fair value of our interest rate derivatives are determined using widely accepted valuation techniques including discounted cash flow analysis on the expected cash flows of the derivatives. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves. We incorporate credit valuation adjustments to appropriately reflect both our own nonperformance risk and the respective counterparty's nonperformance risk in the fair value measurements.

Although the credit valuation adjustments associated with our derivatives utilize Level 3 inputs, such as estimates of current credit spreads, we have determined that the majority of the inputs used to value our derivatives fall within Level 2 of the fair value hierarchy. We have assessed the significance of the impact of the credit valuation adjustments on the overall valuation of our derivative positions and determined that the credit valuation adjustments are not significant to the overall valuation of our interest rate swaps. As a result, we determined that our interest rate swap valuation in its entirety is classified in Level 2 of the fair value hierarchy.

Contingent consideration obligation: The fair value of the contingent consideration obligation includes inputs not observable in the market and thus represents a Level 3 measurement. The contingent consideration obligation consists of a potential obligation related to our LeaseLabs acquisition. The amount to be paid under this obligation is contingent upon the achievement of stipulated operational or financial targets by the business subsequent to acquisition. The fair value for our contingent consideration obligation is estimated based on management's assessment of the probability of achievement of operational or financial targets. The fair value estimate considers the projected future operating or financial results for the factor upon which the respective contingent obligation is dependent. The fair value estimate is generally sensitive to changes in these projections. We develop the projected future operating results based on an analysis of historical results, market conditions, and the expected impact of anticipated changes in our overall business and/or product strategies.

The following tables disclose the assets and liabilities measured at fair value on a recurring basis as ofMarch 31, 2019 and December 31, 2018, by the fair value hierarchy levels as described above:

	Fair value at March 31, 2019			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Interest rate swap agreements	$ 590	$ —	$ 590	$ —
Liabilities:				
Interest rate swap agreements	$ 1,129	$ —	$ 1,129	$ —
Contingent consideration related to the acquisition of:				
LeaseLabs	6,000	—	—	6,000
Total liabilities measured at fair value	$ 7,129	$ —	$ 1,129	$ 6,000

	Fair value at December 31, 2018			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Interest rate swap agreements	$ 923	$ —	$ 923	$ —
Liabilities:				
Interest rate swap agreements	$ 413	$ —	$ 413	$ —
Contingent consideration related to the acquisition of:				
LeaseLabs	6,000	—	—	6,000
Total liabilities measured at fair value	$ 6,413	$ —	$ 413	$ 6,000

There were no transfers between Level 1 and Level 2, or between Level 2 and Level 3 measurements during the three months ended March 31, 2019.

Changes in the fair value of Level 3 measurements were as follows for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
Balance at beginning of period	$ 6,000	$ 414
Settlements through cash payments	—	(247)
Net gain on change in fair value	—	(63)
Balance at end of period	$ 6,000	$ 104

Gains and losses recognized on the change in fair value of our Level 3 measurements are reflected in the line "General and administrative" in the accompanying Condensed Consolidated Statements of Operations.

Assets and liabilities measured at fair value on a non-recurring basis:

In August 2016, we acquired a $3.0 million noncontrolling interest in CompStak, Inc. ("CompStak"), which is an unrelated company that specializes in the aggregation of commercial lease data. We have elected the measurement alternative for the CompStak equity investment, whereby we measure the investment at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. During the three months ended March 31, 2019, we recorded a gain of $2.6 million based on an observable price change, which is reflected in the line "Interest expense and other, net" in the accompanying Condensed Consolidated Statements of Operations. The factors considered in the remeasurement included the price at which the investee issued equity instruments similar to those of our investment and the rights and preferences of those equity instruments compared to ours. We concluded that this fair value measurement should be categorized within Level 2. The carrying value of this investment at March 31, 2019 and December 31, 2018 was $5.6 million and $3.0 million, respectively, and is included in "Other assets" in the accompanying Condensed Consolidated Balance Sheets.

There were no liabilities measured at fair value on a non-recurring basis at March 31, 2019 and December 31, 2018.

14. Stockholders' Equity

In May 2014, our board of directors approved a share repurchase program authorizing the repurchase of up to $50.0 million of our outstanding common stock for a period of up to one year after the approval date. Shares repurchased under the plan are retired. Our board of directors approved a one year extension of this program in 2015, 2016 and 2017. This program expired in May 2018.

In October 2018, our board of directors approved a new share repurchase program authorizing the repurchase of up to $100.0 million of our outstanding common stock. The share purchase program is effective through October 25, 2019. Shares repurchased under the plan are retired.

There was no repurchase activity during the three months ended March 31, 2019 and 2018.

15. Derivative Financial Instruments

On March 31, 2016, we entered into two interest rate swap agreements (collectively the "2016 Swap Agreements"), which are designed to mitigate our exposure to interest rate risk associated with a portion of our variable rate debt. The 2016 Swap Agreements cover an aggregate notional amount of $75.0 million from March 2016 to September 2019 by replacing the obligation's variable rate with a blended fixed rate of 0.89%.

On December 24, 2018, we entered into two interest rate swap agreements (collectively the “2018 Swap Agreements”), which also are designed to mitigate our exposure to interest rate risk associated with a portion of our variable rate debt. The 2018 Swap Agreements cover an aggregate notional amount of $100.0 million from December 2018 to February 2022 by replacing the obligation’s variable rate with a blended fixed rate of 2.57%. We designated both the 2016 and 2018 Swap Agreements (collectively the “Swap Agreements”) as cash flow hedges of interest rate risk.

The changes in the fair value of the Swap Agreements are recorded in accumulated other comprehensive income and is subsequently reclassified into earnings in the period that the hedged forecasted transaction affects earnings. Amounts reported in accumulated other comprehensive income related to the Swap Agreements will be reclassified to interest expense as interest payments are made on our variable-rate debt. We estimate that during the next twelve months, an additional $0.4 million will be reclassified to earnings as a decrease to interest expense.

As of March 31, 2019, the Swap Agreements were still outstanding. The table below presents the notional and fair value of the Swap Agreements as well as their classification in the Condensed Consolidated Balance Sheets as of March 31, 2019 and December 31, 2018:

	Balance Sheet Location	Notional	Fair Value
		(in thousands)	
Derivatives designated as cash flow hedging instruments:			
Swap agreements as of March 31, 2019	Other assets	$ 75,000	$ 590
Swap agreements as of March 31, 2019	Other long-term liabilities	$ 100,000	$ 1,129
Swap agreements as of December 31, 2018	Other assets	$ 75,000	$ 923
Swap agreements as of December 31, 2018	Other long-term liabilities	$ 100,000	$ 413

As of March 31, 2019, we have not posted any collateral related to the Swap Agreements. If we had breached any of the Swap Agreement’s default provisions at March 31, 2019, we could have been required to settle our obligations under the Swap Agreements at their termination value of $0.6 million.

The tables below present the amount of gains and losses related to the Swap Agreements and their location in the Condensed Consolidated Statements of Operations and the Condensed Consolidated Statements of Comprehensive Income for the three months ended March 31, 2019 and 2018, in thousands:

Derivatives Designated as Cash Flow Hedges	Gain (Loss) Recognized in OCI	Location of Gain (Loss) Recognized in Income	Gain (Loss) Recognized in Income
Three months ended March 31, 2019:			
Swap agreements, net of tax	$ (586)	Interest expense and other	$ 220
Three months ended March 31, 2018:			
Swap agreements, net of tax	$ 258	Interest expense and other	$ 99

Gains and losses on our cash flow hedges are net of income tax expense (benefit) of $0.2 million and $(0.1) million during the three months ended March 31, 2019 and 2018, respectively. Cash flows from the Swap Agreements is included within the operating activities in the Condensed Consolidated Statements of Cash Flows, as the Company’s accounting policy is to present cash flows from hedging instruments in the same category as the item being hedged.

16. Subsequent Events

On April 11, 2019, we acquired substantially all of the assets of LeaseTerm Insurance Group, LLC, a provider of alternatives to traditional renters’ insurance programs and tenant security deposit programs for the multifamily housing industry. Purchase consideration was comprised of $25.9 million of cash paid at closing and deferred cash obligations of up to $2.7 million. The deferred cash obligations are subject to any indemnification claims and will be released in part on the first anniversary of the closing with the remainder released on the second anniversary of the closing.

Due to the timing of this acquisition, certain disclosures required by ASC 805, including the allocation of the purchase price, have been omitted because the initial accounting for the business combinations was incomplete as of the filing date of this report. Such information will be included in a subsequent Form 10-Q.

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

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (which Sections were adopted as part of the Private Securities Litigation Reform Act of 1995). Statements preceded by, followed by, or that otherwise include the words "anticipates," "believes," "could," "seeks," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "projects," "should," "will," "would," or similar expressions and the negatives of those terms are generally forward-looking in nature and not historical facts. These forward-looking statements involve known and unknown risks, uncertainties, and other factors which may cause our actual results, performance, or achievements to be materially different from any anticipated results, performance, or achievements. Factors that might cause or contribute to such differences include, but are not limited to, those discussed in the section entitled "Risk Factors" in Part II, Item 1A of this report. You should carefully review the risks described herein and in the other documents we file from time to time with the SEC, including our Annual Report on Form 10-K for fiscal year 2018 previously filed with the SEC on February 27, 2019 You should not place undue reliance on forward-looking statements herein, which speak only as of the date of this report. Except as required by law, we disclaim any intention, and undertake no obligation, to revise any forward-looking statements, whether as a result of new information, a future event, or otherwise.

Overview

We are a leading global provider of software and data analytics to the real estate industry. Clients use our platform of solutions to improve operating performance and increase capital returns. By leveraging data as well as integrating and streamlining a wide range of complex processes and interactions among the rental real estate ecosystem, our platform helps our clients improve financial and operational performance and prudently place and harvest capital.

The substantial majority of our revenue is derived from sales of our on demand software solutions and are sold pursuant to subscription license agreements. We also derive revenue from our professional and other services. For our insurance-based solutions, we earn revenue based on a commission rate that considers earned premiums; agent commission; incurred losses; and profit retained by our underwriting partner. Our transaction-based solutions are priced based on a fixed rate per transaction. We sell our solutions through our direct sales organization and derive substantially all of our revenue from sales in the United States.

We believe there is increasing demand for solutions that bring efficiency and precision to the rental real estate industry, which has historically lacked the tools available to other investment classes. While the use of, and transition to, data analytics and on demand software solutions in the rental real estate industry is growing rapidly, we believe it remains at a relatively early stage of adoption. Additionally, there is a low level of penetration of our on demand software solutions in our existing client base. We believe these factors present us with significant opportunities to generate revenue through sales of additional data analytics and on demand software solutions.

Our company was formed in 1998 to acquire Rent Roll, Inc., which marketed and sold on premise property management systems for the conventional and affordable multifamily rental housing markets. In June 2001, we released OneSite, our first on demand property management system. Since 2002, we have expanded our platform of solutions to include property management, leasing and marketing, resident services, and asset optimization capabilities. In addition to the multifamily markets, we now serve the single family, senior living, student living, military housing, commercial, hospitality, and vacation rental markets. Since July 2002, we have completed over 40 acquisitions of complementary technologies to supplement our internal product development and sales and marketing efforts and expand the scope of our solutions, the types of rental housing and vacation rental properties served by our solutions, and our client base. In connection with this expansion and these acquisitions, we have committed greater resources to developing and increasing sales of our platform of data analytics and on demand solutions. As of March 31, 2019, we had approximately 6,300 employees.

Solutions and Services

Our platform is designed to serve as a single system of record for all of the constituents of the rental real estate ecosystem; to support the entire renter life cycle, from prospect to applicant to residency or guest to post-residency or post-stay; and to optimize operational yields and returns on investment. Common authentication, work flow, and user experience across solution categories enable each of these constituents to access different applications as appropriate for their roles.

Our platform consists of four primary categories of solutions: Property Management, Leasing and Marketing, Resident Services, and Asset Optimization. These solutions provide complementary asset performance and investment decision support; risk mitigation, billing and utility management; resident engagement, spend management, operations and facilities management; and lead generation and lease management capabilities that collectively enable our clients to manage all the stages of the renter life cycle. Each of our solution categories includes multiple product centers that provide distinct capabilities that can be bundled as a package or licensed separately. Each product center integrates with a central repository of lease transaction data, including prospect, renter, and property data. In addition, our open architecture allows third-party applications to access our solutions using our RealPage Exchange platform.

We offer different versions of our platform for different types of properties in different real estate markets. For example, our platform supports the specific and distinct requirements of:

- conventional single family properties;
- conventional multifamily properties;
- affordable Housing and Urban Development ("HUD") properties;
- affordable tax credit properties;
- rural housing properties;
- privatized military housing;
- commercial properties;
- student housing;
- senior living;
- homeowner association properties;
- short-term rentals; and
- vacation rentals.

Property Management

Our property management solutions are referred to as ERP systems. These solutions manage core property management business processes, including leasing, accounting, budgeting, purchasing, facilities management, document management, and support and advisory services. The solutions include a central database of prospect, applicant, renter, and property information that is accessible in real time by our other solutions. Our property management solutions also interface with most popular general ledger accounting systems through our RealPage Exchange platform. This makes it possible for clients to deploy our solutions using our accounting system or a third-party accounting system. Our property management solution category consists of the following primary solutions: OneSite, Propertyware, RealPage Financial Services, Kigo, Spend Management Solutions, SmartSource IT, and EasyLMS.

Leasing and Marketing

Leasing and marketing solutions aim to optimize marketing spend and the leasing process. These solutions manage core leasing and marketing processes, including websites and syndication, paid lead generation, organic lead generation, lead management, automated lead closure, lead analytics, real-time unit availability, automated online apartment leasing, applicant screening, and creative content design. Our leasing and marketing solutions category consists of the following primary solutions: Online Leasing, Contact Center, Websites & Syndication, Intelligent Lease Management, LeaseLabs, Lead2Lease CRM, Resident Screening, and MyNewPlace.

Resident Services

Our resident services solutions provide a platform to optimize the transactional and social experience of prospects and renters, and enhance a property's reputation. These solutions facilitate core renter management business processes including utility billing, renter payment processing, service requests, lease renewal, renter's insurance, and consulting and advisory services. Our resident services solution category primarily consists of the following solutions: Resident Utility Management, Resident Payments, Resident Portal, Contact Center Maintenance, and Renter's Insurance.

Asset Optimization

Our asset optimization solutions aim to optimize property financial and operational performance, and provide comprehensive analytics-based decision support for optimum investment performance throughout the phases of real estate investment (e.g., acquisition, operation, renovation, and disposition). These solutions facilitate core asset management, business intelligence, performance benchmarking and investment analysis including real-time yield management, revenue growth forecasting, key variable sensitivity forecasting, internal operating metric benchmarking and external market benchmarking. Our asset optimization solution category consists of the following primary solutions: YieldStar Revenue Management, Business Intelligence, and Asset and Investment Management.

Professional Services

We have developed repeatable, cost-effective consulting and implementation services to assist our clients in taking advantage of our capabilities and solutions. Our consulting and implementation methodology leverages the nature of our on demand software architecture, the industry-specific expertise of our professional services employees, and the design of our platform to simplify and expedite the implementation process. Our consulting and implementation services include project and application management procedures, business process evaluation, business model development and data conversion. Our consulting teams work closely with customers to facilitate the smooth transition and operation of our solutions.

We offer training programs for training administrators and onsite property managers on the use of our solutions. Training options include regularly hosted classroom and online instruction (through our online learning courseware), as well as online webinars. Our clients can integrate their own training content with our content to deliver an integrated and customized training program for their on-site property managers.

Recent Developments

Current Acquisition Activity

On April 11, 2019, we acquired substantially all of the assets of LeaseTerm Insurance Group, LLC, a provider of alternatives to traditional renters' insurance programs and tenant security deposit programs for the multifamily housing industry. Purchase consideration was comprised of $25.9 million of cash paid at closing and deferred cash obligations of up to $2.7 million, which are subject to working capital adjustments.

Key Business Metrics

In addition to traditional financial measures, we monitor our operating performance using a number of financially and non-financially derived metrics that are not included in our Condensed Consolidated Financial Statements. We monitor the key performance indicators reflected in the following table:

	Three Months Ended March 31,	
	2019	2018
	(in thousands, except dollar per unit data and percentages)	
Revenue:		
Total revenue	$ 234,306	$ 201,301
On demand revenue	$ 226,519	$ 193,300
On demand revenue as a percentage of total revenue	96.7 %	96.0 %
Non-GAAP total revenue	$ 234,530	$ 201,614
Non-GAAP on demand revenue	$ 226,743	$ 193,613
Adjusted EBITDA	$ 65,176	$ 54,161
Ending on demand units	16,401	13,173
Average on demand units	16,310	13,088
On demand annual client value	$ 912,060	$ 779,446
Annualized on demand revenue per ending on demand unit	$ 55.61	$ 59.17

On demand revenue: This metric represents the GAAP revenue derived from license and subscription fees relating to our on demand software solutions, typically licensed over one year terms; commission income from sales of renter's insurance policies; and transaction fees for certain of our on demand software solutions. We consider on demand revenue to be a key business metric because we believe the market for our on demand software solutions represents the largest growth opportunity for our business.

On demand revenue as a percentage of total revenue: This metric represents on demand revenue for the period presented divided by total revenue for the same period. We use on demand revenue as a percentage of total revenue to measure our success executing our strategy to increase the penetration of our on demand software solutions and expand our recurring revenue streams attributable to these solutions. We expect our on demand revenue to remain a significant percentage of our total revenue although the actual percentage may vary from period to period due to a number of factors, including the timing of acquisitions; professional and other revenues; and on premise perpetual license sales and maintenance fees.

Non-GAAP total revenue: This metric is calculated by adding acquisition-related and other deferred revenue adjustments to total revenue. We believe it is useful to include deferred revenue written down for GAAP purposes under purchase accounting rules and revenue deferred due to a lack of historical experience determining the settlement of the contractual obligation in order to appropriately measure the underlying performance of our business operations in the period of activity and associated expense. Further, we believe this measure is useful to investors as a way to evaluate our ongoing performance.

The following provides a reconciliation of GAAP to non-GAAP total revenue:

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
Total revenue	$ 234,306	$ 201,301
Acquisition-related and other deferred revenue adjustments	224	313
Non-GAAP total revenue	$ 234,530	$ 201,614

Non-GAAP on demand revenue: This metric reflects total on demand revenue plus acquisition-related and other deferred revenue adjustments, as described above. We believe inclusion of these items provides a useful measure of the underlying performance of our on demand business operations in the period of activity and associated expense. Further, we believe that investors and financial analysts find this measure to be useful in evaluating our ongoing performance because it provides a more accurate depiction of on demand revenue.

The following provides a reconciliation of GAAP to non-GAAP on demand revenue:

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
On demand revenue	$ 226,519	$ 193,300
Acquisition-related and other deferred revenue adjustments	224	313
Non-GAAP on demand revenue	$ 226,743	$ 193,613

Adjusted EBITDA: We define Adjusted EBITDA as net income, plus (1) acquisition-related and other deferred revenue adjustments, (2) depreciation, asset impairment, and the loss on disposal of assets, (3) amortization of product technologies and intangible assets, (4) change in fair value of equity investment, (5) acquisition-related expense, (6) interest expense, net, (7) income tax expense (benefit), and (8) stock-based expense. We believe that investors and financial analysts find this non-GAAP financial measure to be useful in analyzing our financial and operational performance, comparing this performance to our peers and competitors, and understanding our ability to generate income from ongoing business operations.

The following provides a reconciliation of net income to Adjusted EBITDA:

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
Net income	$ 11,272	$ 10,901
Acquisition-related and other deferred revenue adjustments	224	313
Depreciation, asset impairment, and loss on disposal of assets	8,760	7,818
Amortization of product technologies and intangible assets	19,350	16,384
Change in fair value of equity investment	(2,600)	—
Acquisition-related expense	29	1,007
Interest expense, net	8,581	7,721
Income tax expense (benefit)	4,647	(301)
Stock-based expense	14,913	10,318
Adjusted EBITDA	$ 65,176	$ 54,161

Ending on demand units: This metric represents the number of rental housing units managed by our clients with one or more of our on demand software solutions at the end of the period. We use ending on demand units to measure the success of our strategy of increasing the number of rental housing units managed with our on demand software solutions. Property unit counts are provided to us by our clients as new sales orders are processed. Property unit counts may be adjusted periodically as information related to our clients' properties is updated or supplemented, which could result in adjustments to the number of units previously reported.

Average on demand units: We calculate average on demand units as the average of the beginning and ending on demand units for each quarter in the period presented. This metric is a measure of our success increasing the number of on demand software solutions utilized by our clients to manage their rental housing units, our overall revenue, and profitability.

On demand annual client value ("ACV"): ACV represents our estimate of the annual value of our on demand revenue contracts at a point in time. We monitor this metric to measure our success in increasing the number of on demand units, and the amount of software solutions utilized by our clients to manage their rental housing units.

On demand revenue per ending on demand unit ("RPU"): We define RPU as ACV divided by ending on demand units. We monitor this metric to measure our success in increasing the penetration of on demand software solutions utilized by our clients to manage their rental housing units.

Non-GAAP Financial Measures

We report our financial results in accordance with GAAP; however, we believe that, in order to properly understand our short-term and long-term financial, operational, and strategic trends, it may be helpful for investors to exclude certain non-cash or non-recurring items when used as a supplement to financial performance measures in accordance with GAAP. These non-cash or non-recurring items result from facts and circumstances that vary in both frequency and impact on continuing operations. We also use results of operations excluding such items to evaluate our operating performance compared against prior periods, make operating decisions, determine executive compensation, and serve as a basis for long-term strategic planning. These non-GAAP financial measures provide us with additional means to understand and evaluate the operating results and trends in our ongoing business by eliminating certain non-cash expenses and other items that we believe might otherwise make comparisons of our ongoing business with prior periods more difficult, obscure trends in ongoing operations, reduce our ability to make useful forecasts, or obscure the ability to evaluate the effectiveness of certain business strategies and management incentive structures. In addition, we also believe that investors and financial analysts find this information helpful in analyzing our financial and operational performance and comparing this performance to our peers and competitors. These non-GAAP financial measures are used in conjunction with traditional GAAP financial measures as part of our overall assessment of our performance.

We do not place undue reliance on non-GAAP financial measures as measures of operating performance. Non-GAAP financial measures should not be considered substitutes for other measures of financial performance or liquidity reported in accordance with GAAP. There are limitations to using non-GAAP financial measures, including that other companies may calculate these measures differently than we do; that they do not reflect changes in, or cash requirements for, our working capital; and that they do not reflect our capital expenditures or future requirements for capital expenditures. We compensate for the inherent limitations associated with using non-GAAP financial measures through disclosure of these limitations, presentation of our financial statements in accordance with GAAP, and reconciliation of non-GAAP financial measures to the most directly comparable GAAP financial measures.

We exclude or adjust each of the items identified below from the applicable non-GAAP financial measure referenced above for the reasons set forth with respect to each excluded item:

Acquisition-related and other deferred revenue: These items are included to reflect deferred revenue written down for GAAP purposes under purchase accounting rules and revenue deferred due to a lack of historical experience determining the settlement of the contractual obligation in order to appropriately measure the underlying performance of our business operations in the period of activity and associated expense.

Asset impairment and loss on disposal of assets: These items comprise gains and/or losses on the disposal and impairment of long-lived assets, and impairment of indefinite-lived intangible assets, which are not reflective of our ongoing operations. We believe exclusion of these items facilitates a more accurate comparison of our results of operations between periods.

Depreciation of long-lived assets: Long-lived assets are depreciated over their estimated useful lives in a manner reflecting the pattern in which the economic benefit is consumed. Management is limited in its ability to change or influence these charges after the asset has been acquired and placed in service. We do not believe that depreciation expense accurately reflects the performance of our ongoing operations for the period in which the charges are incurred, and are therefore not considered by management in making operating decisions.

Amortization of product technologies and intangible assets: These items are amortized over their estimated useful lives and generally cannot be changed or influenced by management after acquisition. Accordingly, these items are not considered by us in making operating decisions. We do not believe such charges accurately reflect the performance of our ongoing operations for the period in which such charges are incurred.

Change in fair value of equity investment: This represents changes in fair value of our equity investment based on observable price changes in orderly transactions for an identical or similar investment of the same issuer. We believe exclusion of these items facilitates a more accurate comparison of our results of operations between periods as these items are not reflective of our ongoing operations.

Acquisition-related expense: These items consist of direct costs incurred in our business acquisition transactions and the impact of changes in the fair value of acquisition-related contingent consideration obligations. We believe exclusion of these items facilitates a more accurate comparison of the results of our ongoing operations across periods and eliminates volatility related to changes in the fair value of acquisition-related contingent consideration obligations.

Stock-based expense: This item is excluded because these are non-cash expenditures that we do not consider part of ongoing operating results when assessing the performance of our business, and also because the total amount of the expenditure is partially outside of management's control because it is based on factors such as stock price, volatility, and interest rates, which may be unrelated to our performance during the period in which the expenses are incurred.

Key Components of Our Results of Operations

Revenue

We derive our revenue from two primary sources: our on demand software solutions and our professional and other services.

On demand revenue: Revenue from our on demand software solutions is comprised of license and subscription fees relating to our on demand software solutions, typically licensed for one year terms; commission income from sales of renter's insurance policies; and transaction fees for certain on demand software solutions, such as payment processing, spend management, and billing services. For our insurance based solutions, our agreement provides for a fixed commission on earned premiums related to the policies sold by us. The agreement also provides for a contingent commission to be paid to us in accordance with the agreement. Our transaction-based solutions are priced based on a fixed rate per transaction.

Professional and other revenue: Revenue from professional and other services consists of consulting and implementation services; training; and other ancillary services. We complement our solutions with professional and other services for our clients willing to invest in enhancing the value or decreasing the implementation time of our solutions. Our professional and other services are typically priced as time and materials engagements. Professional and other revenue also includes revenues generated from sub-meter installation services under our resident utility management solutions, and our on premise solutions.

Cost of Revenue

Cost of revenue consists primarily of personnel costs related to our operations; support services; training and implementation services; expenses related to the operation of our data centers; and fees paid to third-party service providers. Personnel costs include salaries, bonuses, stock-based expense, and employee benefits. Cost of revenue also includes an allocation of facilities costs, overhead costs, and depreciation, which are allocated based on headcount.

Amortization of Product Technologies

Amortization of product technologies includes amortization of developed product technologies related to strategic acquisitions and amortization of capitalized development costs.

Operating Expenses

We classify our operating expenses into three primary categories: product development, sales and marketing, and general and administrative. Our operating expenses primarily consist of personnel costs; costs for third-party contracted development; marketing; legal; accounting and consulting services; and other professional service fees. Personnel costs for each category of operating expenses include salaries, bonuses, stock-based expense, and employee benefits for employees in that category. Our operating expenses also include an allocation of our facilities costs; overhead costs and depreciation based on headcount for that category.

Product development: Product development expense consists primarily of personnel costs for our product development employees and executives, information technology and facilities, and fees to contract development vendors. Our product development efforts are focused primarily on increasing the functionality and enhancing the ease of use of our platform of solutions and expanding our suite of data analytics and on demand software solutions. In addition to our locations in the United States, we maintain product development and service centers in Hyderabad, India; Manila, Philippines; and Cebu City, Philippines.

Sales and marketing: Sales and marketing expense consists primarily of personnel costs for our sales, marketing, and business development employees and executives; information technology; travel and entertainment; and marketing programs. Marketing programs consist of amounts paid for product marketing, renter's insurance; other advertising; trade shows; user conferences; public relations; and industry sponsorships and affiliations.

General and administrative: General and administrative expense consists of personnel costs for our executives, finance and accounting, human resources, management information systems, and legal personnel. In addition, general and administrative expense includes fees for professional services, including legal, accounting, and other consulting services; information technology and facilities costs; and acquisition-related costs, including direct costs incurred to complete our acquisitions and changes in the fair value of our acquisition-related contingent consideration obligations.

Amortization of intangible assets: Amortization of intangible assets consist of amortization of purchased intangible assets, including client relationships; key vendor and supplier relationships; finite-lived trade names; and non-compete agreements, obtained in connection with our acquisitions.

Interest Expense and Other, Net

Interest expense and other, net, consists primarily of interest income, interest expense, and gains or losses and impairments on investments. Interest income represents earnings from our cash and cash equivalents. Interest expense is associated with amounts borrowed under the Credit Facility, Convertible Notes, finance lease obligations, and certain acquisition-related liabilities, and includes expense from the amortization of related discounts and debt issuance costs. We participate in interest rate swap agreements, the purpose of which is to eliminate variability in interest rate payments on a portion of the Term Loans. For that portion, the swap agreements replace the Term Loan's variable rate with a fixed rate.

Critical Accounting Policies and Estimates

The preparation of our Condensed Consolidated Financial Statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses, and related disclosures. We base these estimates and assumptions on historical experience, projected future operating or financial results, or on various other factors that we believe to be reasonable and appropriate under the circumstances. We reconsider and evaluate our estimates and assumptions on an on-going basis. Accordingly, actual results may differ significantly from these estimates.

We believe that the following critical accounting policies involve our more significant judgments, assumptions and estimates, and therefore, could have the greatest potential impact on our Condensed Consolidated Financial Statements:

- Revenue recognition;
- Deferred commissions;
- Stock-based expense;
- Income taxes, including deferred tax assets and liabilities;
- Business combinations;
- Goodwill and indefinite-lived intangible assets; and
- Internally developed software

Please refer to our Annual Report on Form 10-K filed with the SEC on February 27, 2019 for a discussion of such policies.

Recently Adopted Accounting Standards

We adopted ASU 2016-02, *Leases (Topic 842),* on January 1, 2019 using the optional transition method provided for in ASU 2018-11 *Leases - Targeted Improvements* which eliminated the requirement to restate amounts presented prior to January 1, 2019. The impact of the adoption of ASC 842 resulted in the recognition of ROU assets and lease liabilities for operation leases of $73.9 million and $101.5 million, respectively at the Transition Date which included reclassifying deferred rent as a component of the ROU asset. As of the Transition Date, we had insignificant finance leases.

We determine if an arrangement contains a lease and the classification of that lease, if applicable, at inception. Our ROU assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. For our real estate contracts with lease and non-lease components, we have elected to combine the lease and non-lease components as a single lease component. The implicit rate within our leases are generally not determinable and we use our incremental borrowing rate at the lease commencement date to determine the present value of lease payments. The determination of our incremental borrowing rate required judgment. We determine our incremental borrowing rate for each lease using our current borrowing rate, adjusted for various factors including collateralization and term to align with the terms of the lease.

Certain of our leases include options to extend the lease. An option to extend the lease is considered in connection with determining the ROU asset and lease liability when it is reasonably certain we will exercise that option. During the first quarter 2019, we determined we were reasonably certain to renew the building lease for our corporate headquarters, and as a result, we reassessed the classification of the lease and determined the building lease met the criteria of a finance lease under ASC 842. As a result, an operating ROU asset and lease liability of $36.4 million and $58.6 million, respectively, were reclassified and remeasured to a finance ROU asset and lease liability of $58.2 million and $80.4 million, respectively. As a result, the costs associated with this lease are now recognized in depreciation and interest expense in 2019. Such costs were included in rent expense in 2018.

See Note 6 for additional disclosures related to the impact of adopting the new lease standard

Results of Operations

The following tables set forth our unaudited results of operations for the specified periods and the components of such results as a percentage of total revenue for the respective periods. The period-to-period comparison of financial results is not necessarily indicative of future results.

Condensed Consolidated Statements of Operations

	Three Months Ended March 31,			
	2019	2019	2018	2018
	(in thousands, except per share and ratio amounts)			
Revenue:				
On demand	$ 226,519	96.7 %	$ 193,300	96.0 %
Professional and other	7,787	3.3	8,001	4.0
Total revenue	234,306	100.0	201,301	100.0
Cost of revenue(1)	90,194	38.5	72,837	36.2
Amortization of product technologies	9,514	4.1	8,295	4.1
Gross profit	134,598	57.4	120,169	59.7
Operating expenses:				
Product development(1)	29,897	12.8	29,040	14.4
Sales and marketing(1)	44,823	19.1	37,680	18.7
General and administrative(1)	28,143	12.0	27,090	13.5
Amortization of intangible assets	9,836	4.2	8,089	4.0
Total operating expenses	112,699	48.1	101,899	50.6
Operating income	21,899	9.3	18,270	9.1
Interest expense and other, net	(5,980)	(2.5)	(7,670)	(3.8)
Income before income taxes	15,919	6.8	10,600	5.3
Income tax expense (benefit)	4,647	2.0	(301)	(0.1)
Net income	$ 11,272	4.8 %	$ 10,901	5.4 %
Net income per share attributable to common stockholders:				
Basic	$ 0.12		$ 0.13	
Diluted	$ 0.12		$ 0.13	
Weighted average common shares outstanding:				
Basic	91,490		81,166	
Diluted	95,561		84,817	
(1) Includes stock-based expense as follows:				
Cost of revenue	$ 1,331		$ 835	
Product development	2,480		2,163	
Sales and marketing	5,350		3,541	
General and administrative	5,752		3,779	

Comparison of the Three Months Ended March 31, 2019 and 2018

Revenue

	Three Months Ended March 31,			
	2019	2018	Change	% Change
	(in thousands, except per unit data and percentages)			
Revenue:				
On demand	$ 226,519	$ 193,300	$ 33,219	17.2 %
Professional and other	7,787	8,001	(214)	(2.7)
Total revenue	$ 234,306	$ 201,301	$ 33,005	16.4
Non-GAAP on demand revenue	$ 226,743	$ 193,613	$ 33,130	17.1
Ending on demand units	16,401	13,173	3,228	24.5
Average on demand units	16,310	13,088	3,222	24.6
On demand annual client value	$ 912,060	$ 779,446	$ 132,614	17.0
Annualized on demand revenue per ending on demand unit	$ 55.61	$ 59.17	$ (3.56)	(6.0)%

The change in total revenue for the three months ended March 31, 2019, as compared to the same period in 2018, was due to the following:

On demand revenue: During the three months ended March 31, 2019, on demand revenue increased $33.2 million, or 17.2%, as compared to the same period in 2018. This increase was attributable to growth across our platform, primarily in resident services. This growth includes organic and acquired revenue from our 2018 acquisitions. Annualized on demand revenue per ending on demand unit as of March 31, 2019 decreased year-over-year by 6.0%, driven by our acquisition of ClickPay which has a lower revenue per unit than the rest of our on demand units. Excluding the impact of the ClickPay acquisition, annualized on demand revenue per ending on demand unit increased 6.2% year-over-year due to organic growth of our solutions and as a result of our 2018 acquisitions.

On demand revenue generated by our property management solutions increased year-over-year by $4.6 million, or 10.1%, during the three months ended March 31, 2019. This increase was primarily driven by the growth of our spend management solutions and adoption of our OneSite property management solutions.

On demand revenue from our resident services solutions continued to experience significant growth, increasing by $19.6 million, or 25.4%, during the three months ended March 31, 2019, as compared to the same period in 2018. This growth was principally driven by incremental revenue from our acquisition of ClickPay in the second quarter of 2018, and the continued growth of our payments solutions.

On demand revenue from our leasing and marketing solutions for the three months ended March 31, 2019, increased by $4.9 million, or 12.3%, as compared to the same period in 2018. This increase was largely attributable to incremental revenue from our acquisition of LeaseLabs in the third quarter of 2018.

On demand revenue derived from our asset optimization solutions grew $4.1 million, or 13.2%, during the three months ended March 31, 2019, as compared to the same period in 2018. This growth was attributable to organic growth across our asset optimization platform, evidencing market acceptance of data-driven solutions, as well as incremental revenue from our acquisition of Rentlytics in the fourth quarter of 2018.

On demand unit metrics: As of March 31, 2019, one or more of our on demand solutions was utilized in the management of 16.4 million rental property units, representing a year-over-year net increase of 3.2 million units, or 24.5%. This increase was primarily due to our recent acquisitions, which accounted for approximately 15.4% of total ending on demand units, as well as solid organic unit growth. On demand units managed by our clients renewed at an average rate of 97.7% over a trailing twelve-month period ended March 31, 2019.

Cost of Revenue

	Three Months Ended March 31,			
	2019	2018	Change	% Change
	(in thousands, except percentages)			
Cost of revenue	$ 85,192	$ 69,068	$ 16,124	23.3%
Stock-based expense	1,331	835	496	59.4
Depreciation	3,671	2,934	737	25.1
Total cost of revenue	$ 90,194	$ 72,837	$ 17,357	23.8%

During the three months ended March 31, 2019, cost of revenue, excluding stock-based expense, and depreciation, increased$16.1 million as compared to the same periods in 2018. Direct costs increased $8.7 million during the three months ended March 31, 2019, driven by incremental costs from our recent acquisitions and higher transaction volume from our payment processing solutions. Personnel expense increased year-over-year during the three month periods by $6.6 million, primarily attributable to new employees from our recent acquisitions and investments to support our ongoing organic growth. Information technology and facilities expense also increased $0.5 million during the three months ended March 31, 2019, as compared to the same periods in2018.

Amortization of Product Technologies

	Three Months Ended March 31,			
	2019	2018	Change	% Change
	(in thousands, except percentages)			
Amortization of product technologies	$ 9,514	$ 8,295	$ 1,219	14.7%

Amortization of product technologies increased $1.2 million during the three months ended March 31, 2019, as compared to the same period in2018. Higher amortization expense was primarily driven by the addition of developed product technologies in connection with our 2018 acquisitions.

During the three months ended March 31, 2019, our gross margin decreased year-over-year from59.7% to 57.4%. This margin compression was driven primarily by incremental costs related to our recent acquisitions and growth in our payments solutions.

Operating Expenses

Product development

	Three Months Ended March 31,			
	2019	2018	Change	% Change
	(in thousands, except percentages)			
Product development	$ 25,766	$ 25,539	$ 227	0.9%
Stock-based expense	2,480	2,163	317	14.7
Depreciation	1,651	1,338	313	23.4
Total product development expense	$ 29,897	$ 29,040	$ 857	3.0%

Product development expense, excluding stock-based expense and depreciation, increased$0.2 million for the three months ended March 31, 2019 as compared to the same periods in 2018. This increase is primarily driven incremental expenses associated with our 2018 acquisitions.

Total product development expense as a percentage of total revenue for thethree months ended March 31, 2019 and 2018 decreased to 12.8% from 14.4%, primarily due to scale across our product development function.

Sales and marketing

	Three Months Ended March 31,			
	2019	2018	Change	% Change
	(in thousands, except percentages)			
Sales and marketing	$ 37,967	$ 32,911	$ 5,056	15.4%
Stock-based expense	5,350	3,541	1,809	51.1
Depreciation	1,506	1,228	278	22.6
Total sales and marketing expense	$ 44,823	$ 37,680	$ 7,143	19.0%

Sales and marketing expense, excluding stock-based expense and depreciation, increased year-over-year by$5.1 million during the three months ended March 31, 2019, as compared to the same period in 2018. Personnel expense increased year-over-year by$3.5 million compared to the respective period in 2018, driven by our continued investments in our sales force and product marketing team and incremental headcount from our recent acquisitions. Marketing program and travel expenses increased year-over-year by $1.0 million reflecting investments to accelerate client demand across our portfolio of solutions.

Total sales and marketing expense as a percentage of total revenue increased slightly from18.7% for the three months ended March 31, 2018 to 19.1% for the three months ended March 31, 2019.

General and administrative

	Three Months Ended March 31,			
	2019	2018	Change	% Change
	(in thousands, except percentages)			
General and administrative	$ 20,745	$ 21,935	$ (1,190)	(5.4)%
Stock-based expense	5,752	3,779	1,973	52.2
Depreciation	1,646	1,376	270	19.6
Total general and administrative expense	$ 28,143	$ 27,090	$ 1,053	3.9 %

General and administrative expense for the three months ended March 31, 2019, excluding stock-based expense and depreciation, decreased $1.2 million, as compared to the same period of 2018. These net changes resulted from a combination of factors. Legal and professional fees decreased $2.6 million principally related to costs associated with our 2018 settlement with the Federal Trade Commission (“FTC”) recognized in the three months ended March 31, 2018. Losses on disposal of assets decreased $0.7 million, primarily related to the early retirement of assets and upgrades in our data center infrastructure during the first quarter of 2018. These reductions were offset by a year-over year increase in personnel expense of $1.5 million for the three months ended March 31, 2019, reflecting investments to support our continued growth and incremental headcount from our recent acquisitions.

Total general and administrative expense as a percentage of total revenue decreased from13.5% to 12.0% for the three months ended March 31, 2018, as compared to the same period in 2019, primarily driven by the impact of 2018 legal costs associated with the FTC settlement.

Amortization of intangible assets

	Three Months Ended March 31,			
	2019	2018	Change	% Change
	(in thousands, except percentages)			
Amortization of intangible assets	$ 9,836	$ 8,089	$ 1,747	21.6%

Amortization expense of intangible assets increased $1.7 million during the three months ended March 31, 2019, as compared to the same period in 2018. Higher amortization expense was primarily driven by the addition of finite-lived client relationship and trade name assets in connection with our 2018 acquisitions.

Interest Expense and Other, Net

	Three Months Ended March 31,			
	2019	2018	Change	% Change
	(in thousands, except percentages)			
Interest expense	$ (9,201)	$ (7,756)	$ (1,445)	18.6 %
Interest income	620	35	585	1,671.4
Change in fair value of equity investment	2,600	—	2,600	100.0
Other income	1	51	(50)	(98.0)
Total interest expense and other, net	$ (5,980)	$ (7,670)	$ 1,690	(22.0)%

Interest expense and other, net for the three months ended March 31, 2019, decreased $1.7 million as compared to the same period in 2018. This decrease was primarily attributable to a $2.6 million write up of the fair value of our investment in CompStak, following an observable price change in their stock. Refer to Note 3 of the accompanying Condensed Consolidated Financial Statements for further discussion of this change in fair value. The decrease was partially offset by interest expense recognized on our finance lease liabilities following our adoption of ASC 842.

Provision for Taxes

We compute our provision for income taxes on a quarterly basis by applying an estimated annual effective tax rate to income from recurring operations and by calculating the tax effect of discrete items recognized during the quarter. Our effective income tax rate was 29.2% and (2.8)% for the three months ended March 31, 2019 and 2018, respectively. Our effective rate is higher than the statutory rate for the three months ended March 31, 2019, primarily because of the effect of the BEAT tax, state taxes and certain non-deductible expenses, offset, in part, by $1.7 million of excess tax benefits from stock-based compensation recognized as discrete items as required by ASU 2016-09.

Our effective rate is lower than the statutory rate for the three months ended March 31, 2018, primarily because of $4.2 million of excess tax benefits from stock-based compensation recognized as discrete items, as required by ASU 2016-09.

Liquidity and Capital Resources

Our primary sources of liquidity as of March 31, 2019, consisted of $252.7 million of cash and cash equivalents, $350.0 million available under the Revolving Facility, amounts available under the Credit Facility's Accordion Feature, and $24.3 million of working capital (excluding $252.7 million of cash and cash equivalents, $295.9 million of convertible notes, and $121.5 million of deferred revenue).

Our principal uses of liquidity have been to fund our operations, working capital requirements, capital expenditures and acquisitions, to service our debt obligations, and to repurchase shares of our common stock. We expect that working capital requirements, capital expenditures, acquisitions, debt service, and share repurchases will continue to be our principal needs for liquidity over the near term. We made capital expenditures of $10.9 million during the three months ended March 31, 2019. We expect capital expenditures to be between 5% and 6% of total revenue during the year ending December 31, 2019 for anticipated expenditures related to our international growth, recent acquisitions, investments related to those acquisitions, and data content and analytics investments. We expect our capital expenditure rate to decrease to 5% of total revenue over the next few years. In addition, we have made several acquisitions in which a portion of the purchase consideration is payable at various times through 2021, with a majority of the deferred cash obligations payable during 2019. We expect to fund these obligations from cash provided by operating activities or funds available under our Credit Facility.

We believe that our existing cash and cash equivalents, working capital (excluding deferred revenue, convertible notes, and cash and cash equivalents), and our cash flows from operations are sufficient to fund our operations, working capital requirements, and planned capital expenditures; and to service our debt obligations for at least the next twelve months. Our future working capital requirements will depend on many factors, including our rate of revenue growth, the timing and size of future acquisitions, the expansion of our sales and marketing activities, the timing and extent of spending to support product development efforts, the timing of introductions of new solutions and enhancements to existing solutions, and the continuing market acceptance of our solutions. We expect to enter into acquisitions of complementary businesses, applications, or technologies in the future that could require us to seek additional equity or debt financing. Additional funds may not be available on terms favorable to us, or at all.

As of December 31, 2018, we had gross federal and state net operating loss ("NOL") carryforwards of $237.6 million and $81.2 million, respectively. Our federal and state NOL carryforwards may be available to offset potential payments of future income tax liabilities. If unused, the gross federal NOLs will begin to expire in 2024 and the state NOLs will begin to expire in 2019. Total gross state NOLs expiring in the next five years is approximately $2.1 million.

The following table sets forth cash flow data for the periods indicated therein:

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
Net cash provided by operating activities	$ 3,992	$ 70,771
Net cash used in investing activities	$ (10,873)	$ (14,460)
Net cash used in financing activities	$ (19,353)	$ (7,405)

Net Cash Provided by Operating Activities

During the three months ended March 31, 2019, net cash provided by operating activities consisted of net income of $11.3 million, net non-cash adjustments to net income of $49.6 million, and a net outflow of cash from changes in operating assets and liabilities of $56.9 million. Non-cash adjustments to net income primarily consisted of depreciation and amortization expense of $27.8 million, stock-based expense of $14.9 million, amortization of debt discount and issuance costs of $3.2 million, and amortization of our right-of-use assets of $3.0 million. These items were partially offset by the change in fair value of our investment in CompStak.

Changes in working capital during the three months ended March 31, 2019, included net cash outflows for customer deposits of $50.3 million, primarily attributable to the timing of cash settlements for previously initiated resident transactions related to our payments solutions. Net cash outflows also included changes in accrued compensation, taxes, and benefits of $10.6 million, primarily attributable to the payment of annual bonuses which were previously accrued at prior year-end. These items were partially offset by net cash inflows from changes in accounts payable of $4.0 million, primarily attributable to the timing of vendor invoice receipts and payments.

Net Cash Used in Investing Activities

During the three months ended March 31, 2019, we used $10.9 million for capital expenditures, which primarily included capitalized software development costs and expenditures to support our information technology infrastructure.

Net Cash Used in Financing Activities

During the three months ended March 31, 2019, the net cash used in our financing activities primarily consisted of payments of acquisition-related consideration of $11.4 million, payments on our Term Loans of $4.0 million, and activity under our stock-based expense plans of $3.1 million, primarily attributable to shares repurchased from employees to cover their cost of taxes upon vesting of restricted stock.

Contractual Obligations, Commitments, and Contingencies

The following table summarizes, as of March 31, 2019, our minimum payments, including interest when applicable, for long-term debt and other obligations for the next five years and thereafter:

	Payments Due by Period				
	Total	Less Than 1 year	1-3 years	3-5 years	More Than 5 years
			(in thousands)		
Convertible Notes [1]	$ 363,759	$ 3,881	$ 10,350	$ 349,528	$ —
Term Loans [2]	331,881	20,633	81,444	229,804	—
Operating and finance lease obligations	161,563	19,565	29,733	26,169	86,096
Acquisition-related liabilities [3]	38,409	23,681	14,728	—	—
	$ 895,612	$ 67,760	$ 136,255	$ 605,501	$ 86,096

(1) Represents the aggregate principal amount of $345.0 million and anticipated coupon interest payments related to our Convertible Notes and excludes the unamortized discount and debt issuance costs reflected in our Condensed Consolidated Balance Sheets.

(2) Represents the contractually required principal payments for our Term Loan and Delayed Draw Term Loan and excludes unamortized debt issuance costs reflected in our Condensed Consolidated Balance Sheets. These amounts also include the future interest obligations of our Term Loans, which were estimated using a LIBOR forward rate curve and include the related effects of our interest rate swap agreements.

(3) Represents obligations in connection with our acquisitions comprised of undiscounted amounts payable for our deferred cash and contingent consideration obligations. These amounts exclude deferred stock obligations and potential reductions related to the sellers' indemnification obligations.

Credit Facility

The Credit Facility matures on February 27, 2022, and includes the following:

Revolving Facility

The Credit Facility provides an aggregate principal amount of up to $350.0 million of revolving loans, with sublimits of $10.0 million for the issuance of letters of credit and $20.0 million for swingline loans. Advances under the Revolving Facility may be voluntarily prepaid and re-borrowed. All outstanding principal and accrued but unpaid interest under the Revolving Facility is due at maturity.

Term Loan and Delayed Draw Term Loan

In February 2016, we originated a term loan in the original principal amount of $125.0 million under the Credit Facility. We made quarterly principal payments of $0.8 million through March 31, 2018, which increased to $1.5 million beginning on June 30, 2018, and will increase again to $3.1 million beginning on June 30, 2020. In December 2017, we drew funds of $200.0 million available under the delayed draw term loan. We made quarterly principal payments of $1.3 million through March 31, 2018, that increased to $2.5 million beginning on June 30, 2018, and will increase again to $5.0 million beginning on June 30, 2020.

Principal payments on the Term Loans are due in quarterly installments, as described above, and may not be re-borrowed. All outstanding principal and accrued but unpaid interest is due on the maturity date. We may prepay the Term Loans in whole or in part at any time, without premium or penalty.

Accordion Feature

The Credit Facility also allows us, subject to certain conditions, to request additional term loans or revolving commitments up to an aggregate principal amount of $150.0 million, plus an amount that would not cause our Senior Leverage Ratio to exceed 3.50 to 1.00.

Refer to Note 8 of the accompanying Condensed Consolidated Financial Statements for further discussion of the Credit Facility, including its terms and conditions.

Convertible Notes

In May 2017, we completed a private offering of Convertible Notes with an aggregate principal amount of $345.0 million. The Convertible Notes accrue interest at an annual rate of 1.50%, which is payable semi-annually on May 15 and November 15 of each year. The Convertible Notes mature on November 15, 2022, and may not be redeemed by us prior to their maturity.

The holders may convert their notes to shares of our common stock, at their option, on or after May 15, 2022, and through the second scheduled trading day preceding the maturity date. Prior to May 15, 2022, holders may only convert their notes under certain circumstances specified in the Indenture. The Convertible Notes are convertible at an initial rate of 23.84 shares per $1,000 of principal (equivalent to an initial conversion price of approximately $41.95 per share of our common stock). Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. It is our stated intention to settle the principal balance of the Convertible Notes in cash and any conversion premium obligation in excess of the principal portion in shares of our common stock.

During the first quarter of 2019, the closing price of our common stock exceeded 130% of the conversion price of the Convertible Notes for more than 20 trading days during the last 30 consecutive trading days of the quarter, thereby satisfying one of the early conversion events. As a result, the Convertible Notes are convertible at any time during the second quarter of 2019. Accordingly, as of March 31, 2019, the carrying amount of the Convertible Notes of $295.9 million was classified as a current liability in the accompanying Condensed Consolidated Balance Sheets.

In conjunction with the Convertible Notes offering, we purchased Note Hedges and issued Warrants for approximately 8.2 million shares of our common stock. The Note Hedges have an exercise price of $41.95 per share, consistent with the conversion price of the Convertible Notes, and expire in November 2022. The Note Hedges are generally expected to reduce the potential dilution to our common stock (or, in the event the conversion is settled in cash, to reduce our cash payment obligation) in the event that at the time of conversion our stock price exceeds the conversion price under the Convertible Notes. The Warrants have a strike price of $57.58 per share and expire in ratable portions on a series of expiration dates commencing on February 15, 2023.

Refer to Note 8 of the accompanying Condensed Consolidated Financial Statements for a complete discussion of these transactions and their accounting implications.

Other than the matters discussed above, there have been no other material changes outside normal operations in our contractual obligations from our disclosures within our Form 10-K for the year ended December 31, 2018.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet financing arrangements, and we do not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

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. We do not hold or issue financial instruments for trading purposes.

We had cash and cash equivalents of $252.7 million and $228.2 million at March 31, 2019 and December 31, 2018, respectively. We hold cash and cash equivalents for working capital purposes. We do not have material exposure to market risk with respect to investments, as our investments consist primarily of highly liquid investments purchased with original maturities of three months or less.

We had $301.0 million and $305.0 million outstanding under our Term Loan and Delayed Draw Term Loan, respectively, at March 31, 2019 and December 31, 2018, respectively. The Term Loans are reflected net of unamortized debt issuance costs of $1.2 million and $1.3 million at March 31, 2019 and December 31, 2018, respectively, in the accompanying Condensed Consolidated Balance Sheets. There were no amounts outstanding under our Revolving Facility at March 31, 2019 and December 31, 2018. At our option, amounts borrowed under the Credit Facility accrue interest at a per annum rate equal to either LIBOR, plus a margin ranging from 1.25% to 2.25%, or the Base Rate, plus a margin ranging from 0.25% to 1.25%. The base LIBOR rate is, at our discretion, equal to either one, two, three, or six month LIBOR. The Base Rate is defined as the greater of Wells Fargo's prime rate, the Federal Funds Rate plus 0.50%, or one month LIBOR plus 1.00%. If the applicable variable interest rates changed by 50 basis points, our annual interest expense as of March 31, 2019 would change by approximately $0.6 million.

On March 31, 2016, we entered into two interest rate swap agreements to eliminate variability in interest payments on a portion of the Term Loans. For that portion, the swap agreements replace the term note's variable rate with a blended fixed rate of 0.89%.

On December 24, 2018, we entered into two interest rate swap agreements to eliminate variability in interest payments on a portion of the Term Loans. For that portion, the swap agreements replace the term note's variable rate with a blended fixed rate of 2.57%. We do not use derivative financial instruments for speculative or trading purposes; however, we may adopt additional specific hedging strategies in the future.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Pursuant to Rule 13a-15(b) and Rule 15d-15(b) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), we carried out an evaluation, with the participation of our management, and under the supervision of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined under Rule 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of March 31, 2019, in ensuring that information required to be disclosed in the reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Management's assessment of the effectiveness of our disclosure controls and procedures is expressed at the level of reasonable assurance because management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives.

Changes in Internal Controls

There have been no significant changes in our internal control over financial reporting that occurred during the quarter ended March 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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 error 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.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

We are subject to legal proceedings and claims arising in the ordinary course of business. We are involved in litigation and other legal proceedings and claims, including purported class action lawsuits, that have not been fully resolved. At this time, we believe that any reasonably possible adverse outcome of such matters would not be material either individually or in the aggregate. Our view of these matters may change in the future as litigation and events related thereto unfold.

Item 1A. Risk Factors.

In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed in Part I, "Item 1A Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2018 (the "2018 Form 10-K"), which could materially affect our business, financial condition or future results. The risks described in our 2018 Form 10-K are not the only risks we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and/or results of operations. As of the date of this report, there have been no material changes to the Risk Factors as previously disclosed in Part I, "Item 1A Risk Factors" in our 2018 Form 10-K.

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

(a) Unregistered Sales of Equity Securities

There were no unregistered sales of equity securities during the three months ended March 31, 2019.

In connection with our acquisitions of NovelPay, LLC ("NovelPay") and ClickPay Services, Inc. (collectively with NovelPay, "ClickPay") which were completed in April 2018, as required by the acquisition agreements, on May 3, 2019, we issued an aggregate of 154,281 shares of our common stock to certain of the equity holders of ClickPay, subject to our holdback rights in respect of indemnification and post-closing purchase price adjustments pursuant to the acquisition agreements. The foregoing shares were issued to accredited investors in a private placement exempt under Regulation D under the Securities Act of 1933, as amended.

(c) Purchases of Equity Securities

There was no share repurchase activity during the three months ended March 31, 2019.

In October 2018, our board of directors approved a new share repurchase program authorizing the repurchase of up to $100.0 million of our outstanding common stock. The share purchase program is effective through October 25, 2019. Shares repurchased under the plan are retired.

Item 6. Exhibits.

The exhibits required to be furnished pursuant to Item 6 are listed in the following Exhibit Index.

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Date	Number	Included Herewith
3.1	Amended and Restated Certificate of Incorporation of the Registrant, as amended	10-Q	8/6/2018	3.1	
3.2	Amended and Restated Bylaws of the Registrant	S-1/A	7/26/2010	3.4	
4.1	Form of Common Stock certificate of the Registrant	S-1/A	7/26/2010	4.1	
4.2	Shareholders' Agreement among the Registrant and certain stockholders, dated December 1, 1998, as amended July 16, 1999 and November 3, 2000	S-1	4/29/2010	4.2	
4.3	Second Amended and Restated Registration Rights Agreement among the Registrant and certain stockholders, dated February 22, 2008	S-1	4/29/2010	4.3	
4.4	Indenture between the Registrant and Wells Fargo Bank, National Association, dated May 23, 2017	10-Q	8/4/2017	4.4	
4.5	Form of Global Note to represent the 1.50% Convertible Senior Notes due 2022, of the Registrant	10-Q	8/4/2017	4.5	
4.6	Form of Warrant Confirmation in connection with 1.50% Convertible Senior Notes due 2022, of the Registrant	10-Q	8/4/2017	4.6	
4.7	Form of Call Option Confirmation in connection with 1.50% Convertible Senior Notes due 2022, of the Registrant	10-Q	8/4/2017	4.7	
10.1	Consulting Agreement between the Registrant and W. Bryan Hill, dated January 7, 2019+	10-K	2/27/2019	10.25	
10.2	Employment Agreement between Registrant and Thomas C. Ernst, Jr., dated January 7, 2019+	10-K	2/27/2019	10.33	
10.3	Employment Agreement between Registrant and Kandis Thompson, dated January 7, 2019+	10-K	2/27/2019	10.36	
10.4	Second Amendment to Collateral Agreement by and among the Registrant, certain of its subsidiaries from time to time party thereto, and Wells Fargo Bank, National Association, as administrative agent, dated as of February 26, 2019 and effective as of January 1, 2019				X
10.5	Fifth Amendment to the RealPage, Inc. 2010 Equity Incentive Plan, as amended and restated, dated February 21, 2019+				X
10.6	Form of 2019 Management Incentive Plan+				X
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				X
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				X
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*				X
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*				X
101.INS	Instance				X
101.SCH	Taxonomy Extension Schema				X
101.CAL	Taxonomy Extension Calculation				X
101.LAB	Taxonomy Extension Labels				X
101.PRE	Taxonomy Extension Presentation				X
101.DEF	Taxonomy Extension Definition				X

* Furnished herewith.
\+ Indicates management contract or compensatory plan or arrangement.

SIGNATURES

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

Date: May 7, 2019

RealPage, Inc.

By: /s/ Thomas C. Ernst, Jr.

Thomas C. Ernst, Jr.
Executive Vice President, Chief Financial Officer and Treasurer

Exhibit 10.4

SECOND AMENDMENT TO COLLATERAL AGREEMENT

This SECOND AMENDMENT TO COLLATERAL AGREEMENT (this "Amendment") is dated as of February 26, 2019, and effective as of January 1, 2019 in accordance with Section 3 below, by and among REALPAGE, INC., a Delaware corporation (the "Borrower"), certain subsidiaries of the Borrower party hereto, certain of the Lenders referred to below, and WELLS FARGO BANK, NATIONAL ASSOCIATION, a national banking association, as administrative agent for the Lenders party to the Credit Agreement ("Administrative Agent").

STATEMENT OF PURPOSE:

WHEREAS, the Borrower, certain financial institutions party thereto (the "Lenders") and the Administrative Agent have entered into that certain Credit Agreement dated as of September 30, 2014 (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement");

WHEREAS, the Borrower, the Subsidiary Guarantors and the Administrative Agent have entered into that certain Collateral Agreement dated as of September 30, 2014 (as amended, restated, supplemented or otherwise modified from time to time, the "Collateral Agreement");

WHEREAS, the Borrower has requested certain amendments to the Collateral Agreement as set forth more fully herein;

WHEREAS, subject to the terms of this Amendment, each Lender party hereto has agreed to certain amendments to the Collateral Agreement as set forth more fully herein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

Section 1. Capitalized Terms. All capitalized undefined terms used in this Amendment (including, without limitation, in the introductory paragraph and the statement of purpose hereto) shall have the meanings assigned thereto in the Credit Agreement or, if not defined therein, in the Collateral Agreement (as amended by this Amendment).

Section 2. Amendments to Collateral Agreement. Effective as of the Effective Date (as defined below) and subject to the terms and conditions set forth herein and in reliance upon the representations and warranties set forth herein, the parties hereto agree that the Collateral Agreement is amended as follows:

(a) The following new definitions are hereby added to Section 1.2 of the Collateral Agreement in correct alphabetical order:

""2014 Agency Agreement" means that certain General Agency and Administration Agreement, effective as of January 1, 2014, by and between Multifamily and AMHIC, as in effect on the Closing Date."

""2019 Agency Agreement" means that certain General Agency & Administration Agreement, effective as of January 1, 2019, by and between Multifamily and AMHIC, as delivered to the Administrative Agent on February 26, 2019."

(b) The definition of "Agency Agreement" set forth in Section 1.2 of the Collateral Agreement is hereby amended and restated in its entirety as follows:

""Agency Agreement" means (i) the 2014 Agency Agreement, from the Closing Date through December 31, 2018, and (ii) the 2019 Agency Agreement, from January 1, 2019 through the Latest Maturity Date."

(c) Clause (l) of the definition of "Excluded Assets" set forth in Section 1.2 of the Collateral Agreement is hereby amended and restated in its entirety as follows:

"(l) Trust Property that is subject to a Lien in favor of AMHIC and (i) "Expirations and Records" (as defined in the 2014 Agency Agreement), from the Closing Date through December 31, 2018, and (ii) "Expirations" (as defined in the 2019 Agency Agreement), from January 1, 2019 through the Latest Maturity Date."

Section 3. Conditions to Effectiveness. This Amendment shall be deemed to be effective as of January 1, 2019, upon the satisfaction or waiver of each of the following conditions to the reasonable satisfaction of the Administrative Agent (such date, the "Effective Date"):

(a) The Administrative Agent's receipt of the following, each properly executed by a Responsible Officer of the signing Credit Party, each in form and substance reasonably satisfactory to the Administrative Agent:

(i) this Amendment, duly executed by each of the Credit Parties, the Administrative Agent and the Required Lenders;

(ii) a certificate of a Responsible Officer of the Borrower certifying that attached thereto is a true, correct and complete copy of each of (i) the Agency Agreement and (ii) the Guarantee & Indemnification by the Borrower in favor of AMHIC executed in connection therewith.

(b) Payment of all fees and expenses of the Administrative Agent and Wells Fargo Securities, LLC, and in the case of expenses, to the extent invoiced at least two (2) Business Days prior to the Effective Date (except as otherwise reasonably agreed to by the Borrower), required to be paid on the Effective Date.

(c) The representations and warranties in Section 4 of this Amendment shall be true and correct as of the Effective Date.

For purposes of determining compliance with the conditions specified in this Section 3, each Lender that has signed this Amendment shall be deemed to have consented to, approved or accepted or to be satisfied with, each document or other matter required thereunder to be consented to or approved by or acceptable or satisfactory to a Lender unless the Administrative Agent shall have received notice from such Lender prior to the proposed Effective Date specifying its objection thereto.

Section 4. Representations and Warranties. By its execution hereof, each Credit Party hereby represents and warrants to the Administrative Agent and the Lenders that, as of the date hereof after giving effect to this Amendment:

(a) each of the representations and warranties made by the Credit Parties in or pursuant to the Loan Documents is true and correct in all material respects (except to the extent that such representation and warranty is subject to a materiality or Material Adverse Effect qualifier, in which case it shall be true and correct in all respects), in each case, on and as of the date hereof as if made on and as of the date hereof, except to the extent that such representations and warranties relate to an earlier date, in which case such representations and warranties are true and correct in all material respects as of such earlier date;

(b) no Default or Event of Default has occurred and is continuing as of the date hereof or after giving effect hereto;

(c) it has the right and power and is duly authorized and empowered to enter into, execute and deliver this Amendment and to perform and observe the provisions of this Amendment;

(d) this Amendment has been duly authorized and approved by such Credit Party's board of directors or other governing body, as applicable, and constitutes a legal, valid and binding obligation of such Credit Party, enforceable against such Credit Party in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium or other laws affecting creditors' rights generally and subject to general principles of equity, regardless of whether considered in a proceeding in equity or at law; and

(e) the execution, delivery and performance of this Amendment do not conflict with, result in a breach in any of the provisions of, constitute a default under, or result in the creation of a Lien (other than Permitted Liens) upon any assets or property of any of the Credit Parties, or any of their respective Subsidiaries, under the provisions of, such Credit Party's or such Subsidiary's organizational documents or any material agreement to which such Credit Party or Subsidiary is a party.

Section 5. Effect of this Amendment. On and after the Effective Date, references in the Collateral Agreement to "this Agreement" (and indirect references such as "hereunder", "hereby", "herein", and "hereof"), in the Credit Agreement to "the Collateral Agreement" (and indirect references such as "thereunder", "thereby", "therein", and "thereof") and in any other Loan Document to the "Collateral Agreement" shall be deemed to be references to the Collateral Agreement as modified hereby and as modified by that certain Seventh Amendment to Credit Agreement, Incremental Amendment and Amendment to Collateral Agreement. Except as expressly provided herein, the Credit Agreement and the other Loan Documents shall remain unmodified and in full force and effect. Except as expressly set forth herein, this Amendment shall not be deemed (a) to be a waiver of, or consent to, a modification or amendment of, any other term or condition of the Credit Agreement or any other Loan Document, (b) to prejudice any other right or rights which the Administrative Agent or the Lenders may now have or may have in the future under or in connection with the Credit Agreement or the other Loan Documents or any of the instruments or agreements referred to therein, as the same may be amended, restated, supplemented or otherwise modified from time to time, (c) to be a commitment or any other undertaking or expression of any willingness to engage in any further discussion with the Borrower or any other Person with respect to any waiver, amendment, modification or any other change to the Credit Agreement or the Loan Documents or any rights or remedies arising in favor of the Lenders or the Administrative Agent, or any of them, under or with respect to any such documents or (d) to be a waiver of, or consent to or a modification or amendment of, any other term or condition of any other agreement by and among the Credit Parties, on the one hand, and the Administrative Agent or any other Lender, on the other hand.

Section 6. Costs and Expenses. The Borrower hereby reconfirms its obligations pursuant to Section 12.3 of the Credit Agreement to pay and reimburse the Administrative Agent and its Affiliates in accordance with the terms thereof.

Section 7. Acknowledgments and Reaffirmations. Each Credit Party (a) consents to this Amendment and agrees that the transactions contemplated by this Amendment shall not limit or diminish the obligations of such Person under, or release such Person from any obligations under, any of the Loan Documents to which it is a party, (b) confirms and reaffirms its obligations under each of the Loan Documents to which it is a party and (c) agrees that each of the Loan Documents to which it is a party remains in full force and effect and is hereby ratified and confirmed.

Section 8. Governing Law. THIS AMENDMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.

Section 9. Counterparts. This Amendment may be executed in any number of counterparts, and by different parties hereto in separate counterparts and by facsimile signature, each of which counterparts when so executed and delivered shall be deemed to be an original and all of which taken together shall constitute but one and the same agreement.

Section 10. Electronic Transmission. Delivery of this Amendment by facsimile, telecopy or pdf shall be effective as delivery of a manually executed counterpart hereof; provided that, upon the request of any party hereto, such facsimile transmission or electronic mail transmission shall be promptly followed by the original thereof.

[Signature Pages Follow]

Exhibit 10.4

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed as of the date and year first above written.

BORROWER:

REALPAGE, INC.

By: /s/ Thomas C. Ernst, Jr.
Name: Thomas C. Ernst, Jr.
Title: Executive Vice President, Chief Financial Officer and Treasurer

SUBSIDIARY GUARANTORS:

MULTIFAMILY INTERNET VENTURES, LLC
PROPERTYWARE LLC
LEVEL ONE LLC
RP ABC LLC
REALPAGE VENDOR COMPLIANCE LLC
LEASESTAR LLC
RP NEWCO XV LLC
RP AXIOMETRICS LLC
RP ON-SITE LLC
RP RAINMAKER MULTIFAMILY LLC
NOVELPAY LLC
RP LEASELABS LLC

By: RealPage, Inc., as sole member

By: /s/ Thomas C. Ernst, Jr.
Name: Thomas C. Ernst, Jr.
Title: Executive Vice President, Chief Financial Officer and Treasurer

KIGO, INC.
REALPAGE UTILITY MANAGEMENT INC.
CLICKPAY SERVICES, INC.
RENTLYTICS, INC.

By: /s/ Thomas C. Ernst, Jr.
Name: Thomas C. Ernst, Jr.
Title: Vice President, Chief Financial Officer and Treasurer

Exhibit 10.4

ADMINISTRATIVE AGENT AND LENDERS:

WELLS FARGO BANK, NATIONAL ASSOCIATION, as Administrative Agent, Swingline Lender, Issuing Lender and Lender

By: /s/ Reid R. Landers
Name: Reid R. Landers
Title: Vice President

FIFTH THIRD BANK, as Lender

By: /s/ Marisa Lake
Name: Marisa Lake
Title: Officer

COMERICA BANK, as Lender

By: /s/ Charles Fell
Name: Charles Fell
Title: Vice President

BANK OF AMERICA, N.A., as Lender

By: /s/ Jennifer Yan
Name: Jennifer Yan
Title: Senior Vice President

JPMORGAN CHASE BANK, N.A., as Lender

By: /s/ Min Park
Name: Min Park
Title: Vice President

REGIONS BANK, as Lender

By: /s/ Jason Douglas
Name: Jason Douglas
Title: Director

CAPITAL ONE, NATIONAL ASSOCIATION, as Lender

By: /s/ Andy L. Welicky
Name: Andy L. Welicky
Title: Duly Authorized Signatory

PNC BANK, NATIONAL ASSOCIATION,

as Lender

By: /s/ R. Ruining Nguyen
Name: R. Ruining Nguyen
Title: Senior Vice President

Exhibit 10.5

FIFTH AMENDMENT TO THE REALPAGE, INC.
2010 EQUITY INCENTIVE PLAN
(Amended and Restated Effective June 4, 2014, as further amended)

This Fifth Amendment (this "Amendment") to the RealPage, Inc. (the "Corporation") 2010 Equity Incentive Plan, as amended and restated June 4, 2014 (as further amended, the "Plan") is adopted as of February 21, 2019 (the "Date of Amendment") by the Board. All capitalized terms not defined herein shall have the meanings ascribed to them by the Plan.

Effective as of the Date of Amendment, the Plan is amended as follows:

1. Annual Award to Outside Directors. Sections 12(c) and 12(d) of the Plan are hereby amended and restated to read in their entirety as follows:

(c) Annual Award. Each Outside Director will be automatically granted (an "Annual Award") on April 1 of each year, beginning in 2019, a number of Shares of Restricted Stock determined by dividing (A) $220,000 by (B) the average of the Fair Market Value of a share on each of the 30 trading days immediately preceding (and excluding) the grant date, with the number of Shares rounded up to the nearest whole Share. If the initial election or appointment of such Outside Director occurs on any date other than April 1st, such Outside Director will also be automatically granted a prorated portion of the Annual Award on the date of such election or appointment. The prorated number of Shares of Restricted Stock shall be determined based on the number of complete months remaining between the date of election or appointment and the next April 1st.

(d) Terms. The terms of each Award granted pursuant to this Section will be as follows: The Restricted Stock awarded under each Annual Award will be issued for no cash consideration and will be forfeited and automatically transferred to and reacquired by the Corporation at no cost upon the date the Director ceases to provide services as a member of the Board (the "Forfeiture Provision"). The Forfeiture Provision will lapse as to twenty-five percent (25%) of the Restricted Stock awarded in such Annual Award on the first day of each calendar quarter for four (4) calendar quarters beginning on the first day of the calendar quarter immediately following the date of grant, provided that the Participant continues to serve as a Director through such dates.

2. Miscellaneous. Except as expressly amended hereby, the terms and conditions of the Plan shall remain in full force and effect. This Amendment shall be governed by and construed in accordance with the laws of the State of Texas, without reference to principles of conflict of laws.

RealPage, Inc., by its duly authorized officer, has executed this Fifth Amendment to the Plan on the date indicated below.

REALPAGE, INC.

By: /s/ Stephen Winn
Stephen Winn
Chief Executive Officer
Chairman of the Board

Date: February 21, 2019

Exhibit 10.6

RealPage 2019
Management Incentive Plan

Name: ___________________________ **Eligibility Date: _________________**

Unless otherwise required under applicable law, the Terms and Conditions for the 2019 Management Incentive Plan "MIP or the Plan" are outlined below:

Your MIP has a potential Bonus of ____% of your Base Salary[1] at 100% achievement of your assigned Objectives[2] at Target:

Objective[2]	Weight	Target		
		Min	Mid	Max
Corporate Revenue[3]				
Corporate EBITDA[3]				
Individual Performance[4]				
Total	**100%**			

Plan Year: The 2019 Management Incentive Plan is in effect from January 1, 2019 to December 31, 2019.

To be eligible to earn Bonus award(s) under this plan, the Corporation must achieve greater than the Minimum 2019 Corporate Revenue and EBITDA objectives and you must:

i. be a regular, full-time employee on or before October 1, 2019;
ii. be a regular, full-time employee on the date of each Bonus payment;
iii. be a grade 13 or above;
iv. not be on another incentive plan;
v. achieve an individual performance rating of 2.5 or above for the plan year, regardless of ranking; and
vi. sign and return this letter and attached Goal Alignment Plan to Human Resources.

(1) **Base Salary**: Salary you have earned during the portion of the plan year you are eligible for the MIP.

(2) **Objectives:** Each objective has a Target, a Minimum, and a Maximum. Achieving Target pays out at 100% of the assigned objective. At or below the Minimum has a 0% achievement and at or above the Maximum has a 200% achievement. Achievement above Minimum and below Target or above Target and Below Maximum is calculated on a linear basis from achievement.

(3) **Corporate Revenue** and **EBITDA (**Earnings Before Interest, Taxes, Depreciation and Amortization**)** targets are not listed until year end results are released to the public market. To assess how the Company is doing, the Company will disclose a general range of financials to each plan type after quarterly earnings are released. All of these targets (including minimums and maximums) and awards may be adjusted by the compensation committee based on (i) risk assessment inherent in the target and (ii) special circumstances that were not anticipated when the targets were established.

(4) Individual Performance is based on: Achievement of strategic goals and initiatives identified in your assigned Goal Alignment Plan(s) "GAP," individual performance rating and/or rankings, and other contributions you make during the plan year.

The following is an example of a calculation of the MIP for your reference:
Assume annual base salary earned during the year is $100,000, the Target Bonus is 20% of Base Salary, and the teammate's plan is based on the following measurements:

Corporate Revenue 15%
Corporate EBITDA 10%
Product Revenue 35%
Product Profit 15%
Individual Performance 25%

The Compensation Committee announced that Corporate Revenue and EBITDA were both achieved at 100%. The assigned Product Revenue and Product Profit objectives were both achieved at 100% of target, and the teammate achieved 80% of the Individual Performance objective. The bonus would be calculated as follows:

(1) Bonus based on corporate revenue achievement = $100,000 * .2 * .15 * 1.00 = $ 3,000
(2) Bonus based on corporate EBITDA achievement = $100,000 * .2 * .10 * 1.00 = $ 2,000
(3) Bonus based on Product Revenue achievement = $100,000 * .2 * .35 * 1.00 = $ 7,000
(4) Bonus based on Product Profit achievement = $100,000 * .2 * .15 * 1.00 = $ 3,000
(5) Bonus based on Individual Performance = $100,000 * .2 * .25 * .80 = $ 4,000

Total Bonus **$19,000**

Additional Terms and Conditions:
Net Promoter Score "NPS" measures customer experience and predicts business growth. This score is determined by an annual survey that is completed by RealPage customers and could have an impact on the overall MIP calculation (scaled up or down).
Achievement of all objectives and goals will be determined by the Compensation Committee of the Board of Directors after considering recommendations made by the Chairman and CEO. The compensation committee has the discretion to determine whether specific acquisitions will be included or excluded from the calculation of the achievement of objectives and goals.

New Hires, Promotions and Transfers: If you are hired after the start of the plan year, your bonus will be prorated based upon your eligibility for the plan (e.g., if you were hired/promoted on June 23rd, your bonus would be prorated by 50%). Similarly, if you are transferred or promoted into a new MIP, any bonuses will be prorated based upon your effective date in the new position and achievement of assigned objectives for each plan. If your prior position was also MIP eligible, calculation of bonus for your time in the prior position is also prorated.

All payments under the 2019 MIP are subject to standard withholding policies of the Company, including, without limitation, withholding for Federal Income Tax, FICA, Medicare, etc. If objectives are achieved for the 2019 MIP, payment is generally made by the end of the first quarter following the close of the plan year. At the Company's discretion, payments may be advanced periodically during the plan year. The total annual amount of the bonus for the plan year will be offset by any such advanced payments.

The Plan may be modified or terminated at any time by the Company or the Compensation Committee.

All participants in the Plan are employed "at will" and may be terminated at any time, at the sole discretion of the Company. The Plan does not constitute an employment agreement, nor does it constitute a guarantee of continued employment.

By executing this Plan, the undersigned acknowledges that (s)he has read the Plan, understands the Plan and agrees to be bound by the provisions of the Plan.

____
Employee Name

____
DATE

Exhibit 31.1

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

I, Stephen T. Winn, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period endingMarch 31, 2019 of RealPage, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: May 7, 2019

/s/ Stephen T. Winn

Stephen T. Winn
Chairman of the Board of Directors, Chief Executive Officer, President and Director

Exhibit 31.2

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

I, Thomas C. Ernst, Jr., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period endingMarch 31, 2019 of RealPage, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: May 7, 2019

/s/ Thomas C. Ernst, Jr.

Thomas C. Ernst, Jr.
Executive Vice President, Chief Financial Officer and Treasurer

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of RealPage, Inc. (the “Company”) on Form 10-Q for the period ending March 31, 2019 (the “Report”), I, Stephen T. Winn, Chairman of the Board of Directors, Chief Executive Officer, President and Director of RealPage, Inc., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of RealPage, Inc.

Date: May 7, 2019

/s/ Stephen T. Winn

Stephen T. Winn

Chairman of the Board of Directors, Chief Executive Officer, President and Director

A signed original of this written statement required by Section 906 has been provided to RealPage, Inc. and will be retained by RealPage, Inc. and furnished to the Securities and Exchange Commission or its staff upon request. The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of RealPage, Inc. (the "Company") on Form 10-Q for the period ending March 31, 2019 (the "Report"), I, Thomas C. Ernst, Jr., Executive Vice President, Chief Financial Officer and Treasurer of RealPage, Inc., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of RealPage, Inc.

Date: May 7, 2019

/s/ Thomas C. Ernst, Jr.

Thomas C. Ernst, Jr.
Executive Vice President, Chief Financial Officer and Treasurer

A signed original of this written statement required by Section 906 has been provided to RealPage, Inc. and will be retained by RealPage, Inc. and furnished to the Securities and Exchange Commission or its staff upon request. The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.