Top 100 SaaS Companies Survey:

CAPITALIZATION OF DEVELOPMENT COSTS AND SALES COMMISSIONS

AN ARMANINO WHITE PAPER
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TOP 100 SAAS COMPANIES SURVEY: CAPITALIZATION OF DEVELOPMENT COSTS AND SALES COMMISSIONS

Sales commissions and software development costs (including website or application development costs) continue to be among the top expenditures for software-as-a-service (SaaS) companies. Chief financial officers (CFOs), chief accounting officers (CAOs) and other finance and accounting executives of SaaS companies need to continually evaluate and monitor the industry for emerging trends pertaining to the accounting of these costs. Our annual SaaS survey provides a useful tool to gauge how your organization compares to its peers in these key areas.

The 2020 survey includes over 100 of the top publicly traded SaaS companies (ranked in terms of market cap). We collected the survey information from participants' most recently filed Form 10-Ks, reflecting data for fiscal years ending in calendar year 2019. In addition to looking at capitalization over time, we also looked at capitalization by revenue and by auditor.

At a high level, the survey results show that the percentage of companies capitalizing commissions paid to sales professionals rose sharply, more than tripling compared to our survey three years ago (71% in 2020 versus 22% in 2017).[1] This is not surprising, given that the new revenue recognition rules (ASC 606) took effect for public companies in 2018. The percentage of companies capitalizing development costs, which are not impacted by ASC 606, also increased during this same period (75% in 2020 versus 62% in 2017).

[1] We elected not to publish a survey in 2018 because 2017 was a crossover year for the transition to ASC 606, which skewed the 2017 fiscal year-end data.

GAAP RULES

For reference, here are the rules specific to development costs and commissions capitalization.

Development Cost Capitalization

SaaS development costs are subject to "internal use" software capitalization rules, which typically have a longer window of time for eligible costs to be capitalized, versus the "external use" rules for software licensing companies. Brief summaries of the applicable Financial Accounting Standards Board (FASB) rules are shown in the table below:

SaaS		
Internal Use Software	*Subtopic 350-40*	Capitalization of costs begins when the preliminary project stage is completed, management has committed to funding the project, and it is probable that the project will be completed and the software will be used to perform the function intended. Capitalization ceases at the point in which the project is substantially complete and is ready for its intended purpose.
Website Development Costs	*Subtopic 350-50*	Costs incurred to purchase software tools, or costs incurred during the application development stage for internally developed tools, shall be capitalized.

Traditional Software License		
Costs of Software to Be Sold, Leased, or Marketed	*Subtopic 985-20*	Development costs of software to be sold, leased, or otherwise marketed are subject to capitalization beginning when technological feasibility has been established and ending when the product is available for general release.

Commissions Capitalization

The new revenue recognition standard (ASC 606) mandates that companies capitalize sales commissions if such costs are expected to be recovered through future revenues, unless the amortization period is one year or less. The capitalization of costs incremental to obtaining a contract and determining the period of amortization is one of the most significant areas affected by the new standard, as companies no longer have the option to immediately "expense as you go."

Capitalization Over Time

Sales Commissions

ASC 606 dramatically changed the revenue recognition landscape in 2018, effectively mandating that companies capitalize commissions, if material. As a result, the rate of capitalization in the 2019 survey (66%) tripled compared to the 2017 survey (22%). This further increased in 2020, climbing 500 basis points to 71%.

In 2020, companies that did not disclose commissions capitalized (either claimed commissions were immaterial or were related to deals of less than one year) represented 29% of companies surveyed, down from 34% in 2019. This remains a higher than expected number, given that most SaaS companies pay significant commissions, and sales teams typically focus on multi-year deals.

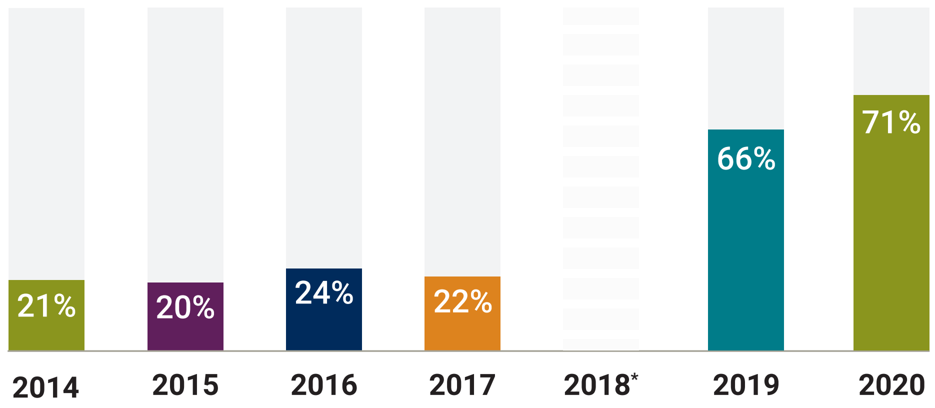
Not surprisingly, the SEC has issued comment letters to certain registrants in connection with similar costs to obtain contracts under ASC 606. Examples of such comments (adapted) are as follows:

- *The SEC notes as a result of adopting ASU 2014-09, Revenue from Contracts with Customers (Topic 606), Registrant identified that the new standard required it to adjust its presentation of costs associated with selling extended service plans and treatment of the amortization of certain bonus and profit-sharing arrangements related to third-party credit card programs. The capitalization and amortization of "certain costs" associated with selling extended service plans was discontinued and are now expensed as incurred. Please tell us the nature of these "certain costs" and why your accounting complies with ASC 606. Please also tell us the nature of the costs that are capitalized.*
- *Registrant discloses that it pays sales commissions based on contract value upon signing a new arrangement with a customer and upon renewals. Registrant further discloses that it amortizes deferred sales commissions over the expected customer life which is approximately five years. Please tell us, and revise to clarify, whether commissions paid upon renewal are commensurate with initial commissions. Also disclose how commissions paid for renewals are considered in your five-year period of benefit for the initial commission. Finally, disclose the period of time over which you amortize commission costs related to contract renewals. Refer to ASC 340-40-35-1 and 340-40-50-2(b).*
- *The SEC notes that the Registrant has applied the practical expedient related to commissions and continue to expense the commissions as incurred since the majority of its contract periods are one year or less. The SEC also notes that you have applied the practical expedient related to quantifying remaining performance obligations since the majority of your contracts are one year or less. Please tell us if you have applied these practical expedients to contracts with terms in excess of one year and, if so, how your application of these practical expedients is consistent with ASC 340-40-25-4 and ASC 606-10-50-14.*

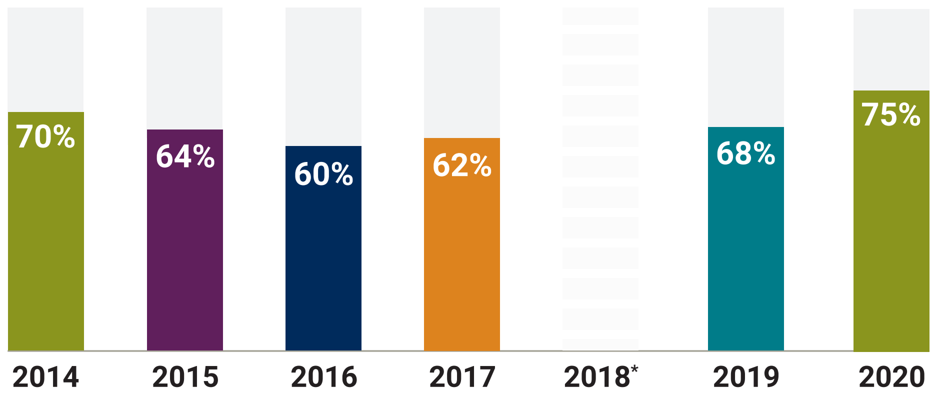
Development Costs

The percentage of companies capitalizing software development costs jumped to 75% in 2020, continuing a multi-year trend. But given the apparent diversity in capitalization shown in the survey, this may be an area where auditors/regulators should seek to enforce greater consistency.

Sales Commissions Capitalization by Year



Software Development Costs Capitalization by Year



*We elected not to publish a survey in 2018 because 2017 was a crossover year for the transition to ASC 606.

Capitalization By Revenue

This year we also sorted the firms by revenue into four brackets, with roughly 25 firms in each bracket: $0 to $209 million, $210 million to $412 million, $413 million to $999 million, and $1 billion and over.

Development Cost Capitalization

The data shows that companies with higher revenue tend to capitalize software development costs more often than companies with lower revenue. For example, in the $0 to $209 million revenue range, only 62% of the companies capitalized software development costs, while in the $1 billion and above revenue range, roughly eight out of 10 companies did so.

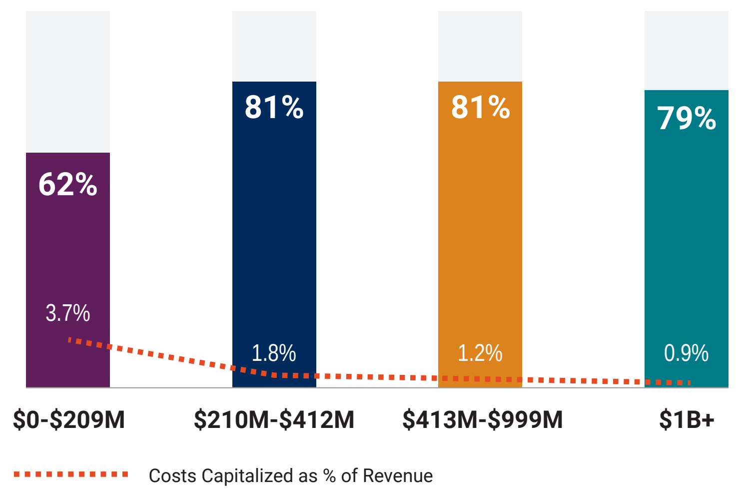
The amount of software development costs capitalized, relative to revenue, is lower for companies with higher revenue. For example, average capitalized software development costs relative to revenue decreased 280 basis points, from 3.7% to 0.9%, as companies' revenue increased. We believe this is due to the absolute amount of capitalized software development costs being higher for companies with more revenue, but the amount of capitalized software development as compared to revenue is relatively lower.

Commission Capitalization

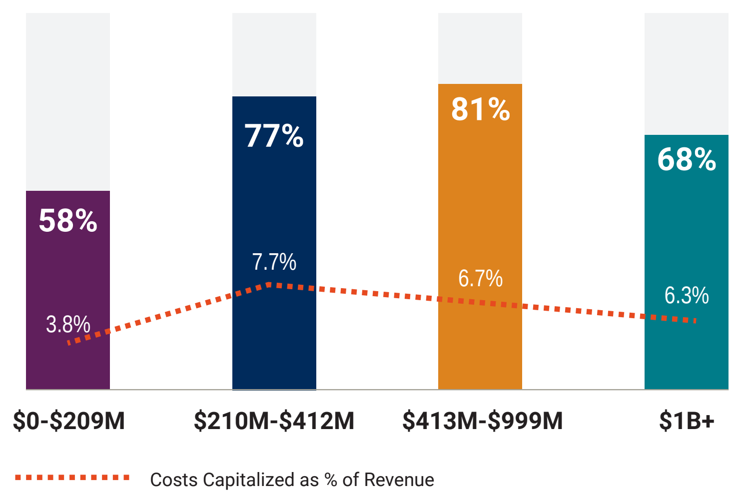
Companies with mid-to-higher revenue also tend to capitalize sales commission costs more often than companies with lower revenue. For example, in the $0 to $209 million revenue stratum, 58% of companies capitalized commission costs, while in the $1 billion and over revenue stratum, 68% of companies did so. Capitalization is highest in companies in the $413 million to $999 million revenue bracket, with 81% capitalizing sales commissions.

The amount of commission costs capitalized relative to revenue also trended upward, from roughly 5% in the previous year (except for firms in last year's $150 million to $400 million revenue bracket, where it was 8.5%) to approximately 6% to 8% in the current year (except for the lowest bracket). Interestingly, the lowest revenue bracket ($0 to $209 million) only capitalized commissions at a rate of 3.8% of revenues, which is about half of the highest capitalization rate (the $210 million to $412 million stratum).

Software Development Capitalization by Revenue



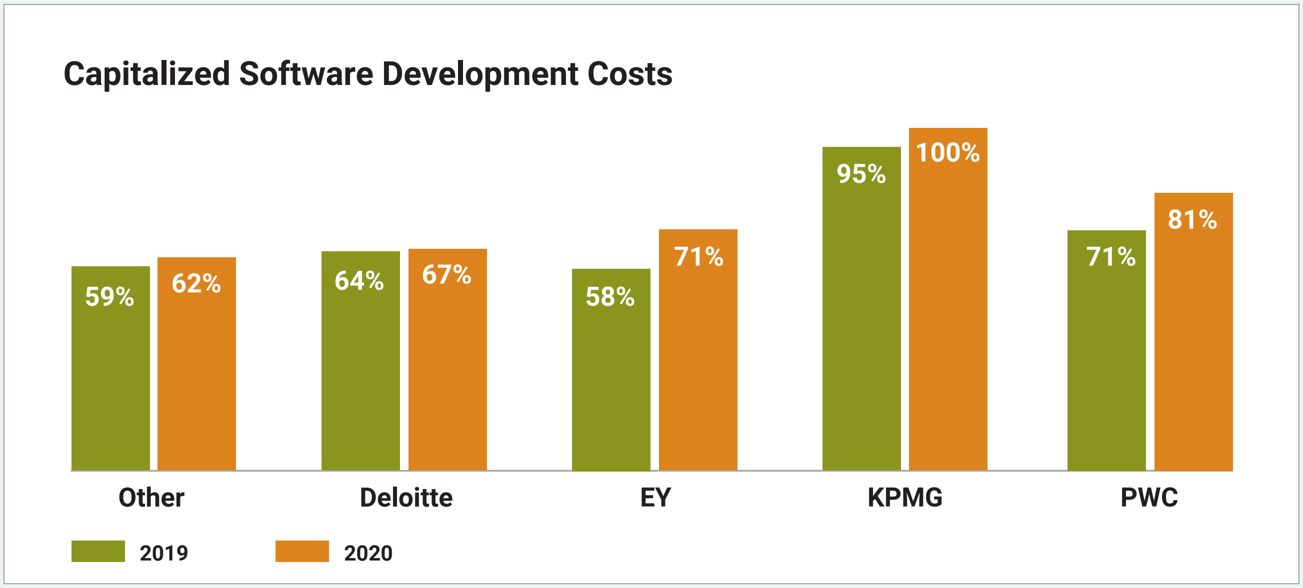
Sales Commissions Capitalization by Revenue



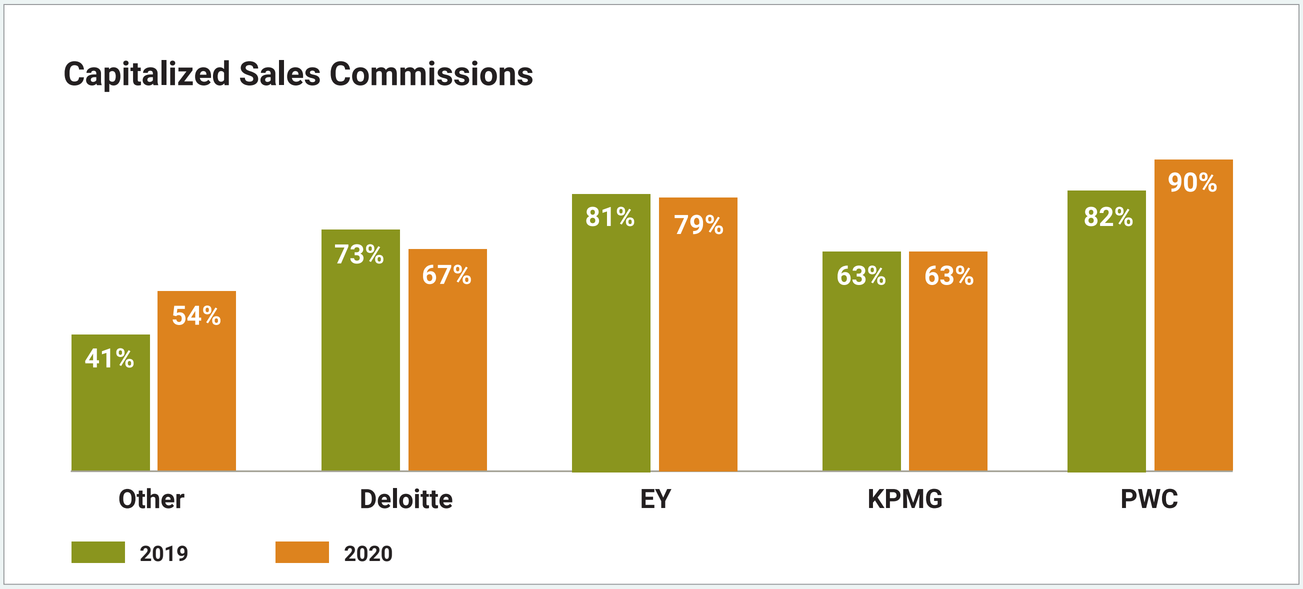
Auditor Correlation to Costs Capitalized

We also analyzed capitalization practices based on the companies' independent registered public accounting firms (auditors). The data showed a wide disparity in practices based on the audit firm.

Of the 106 companies surveyed, 80 used Big 4 auditors. The tables below show the capitalization practices of companies for each Big 4 auditor, and for the 26 companies that did not use a Big 4 audit firm.



Among the registrants audited by the Big 4, 100% of KPMG's clients capitalized software development costs in 2020, while Deloitte had the lowest percentage at 67%. Notably, the percentage of EY clients capitalizing software development costs increased from 58% in 2019 to 71% in 2020. Among registrants audited by other (not Big 4) firms, 62% capitalized software development costs.



Among the registrants audited by the Big 4, PWC had the highest percentage of clients (90%) that capitalized commissions in 2020, while KPMG had the lowest percentage at 63%. Notably, Deloitte and EY had client capitalization declines of 600 basis points and 200 basis points, respectively, from 2019 to 2020. Among registrants audited by other firms, 54% capitalized commissions.

FINAL THOUGHTS

In light of the survey findings and the new ASC 606 standard, SaaS companies should continuously evaluate their decisions on capitalizing software development and commission costs, as there are several short- and long-term implications. They should also consult with their auditors and, ultimately, adopt the method they believe most closely aligns with the intent of the rules.

STRATEGIC INSIGHTS, PRACTICAL ACTIONS

Armanino provides an integrated set of accounting services – audit, tax, consulting and technology solutions – to a wide range of organizations operating both in the U.S. and globally.

You can count on Armanino to think strategically and provide the sound insights that lead to positive action. We address not just your compliance issues, but your underlying business challenges, as well – assessing opportunities, weighing risks, and exploring the practical implications of both your short- and long-term decisions.

When you work with us, we give you options that are fully aligned with your business strategy. If you need to do more with less, we will implement the technology to automate your business processes. If the issue is financial, we can add value companywide. If it's operational, we'll consult with your people about workflow efficiencies. If it is compliance, we'll ensure that you meet the requirements and proactively plan to take full advantage of the changes at hand. At every stage in your company's lifecycle, we'll help you find the right balance of people, processes and technology.

ABOUT THE AUTHORS

For further information regarding cost capitalization, contact one of our SaaS experts:

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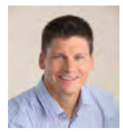

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APPENDIX

Dollars in Thousands. ND=Not Disclosed N/A=Not Applicable

#	Company Name	Ticker Symbol	Auditor	Capitalize Software or Website Development Costs ?	Capitalize Commissions?	YE Date	Revenues, Current Year (CY)	Software Dev.Costs Capitalized on Balance Sheet (BS)	Software Dev. Costs Capitalized (CY)	Amortization Expense of Software Development Costs (CY)	NET Commissions Capitalized (BS)	Commissions Deferred/Capitalized (CY)	Commissions Amortized (CY)
1	3D Systems Corp	DDD	Other	Yes	Yes	12/31/2019	$ 629,094	$22,928	ND	ND	ND	ND	ND
2	Aci Worldwide, Inc.	ACIW	Deloitte	Yes	Yes	12/31/2019	$ 1,258,294	$234,517	ND	ND	ND	ND	ND
3	Activision Blizzard, Inc.	ATVI	PWC	Yes	No	12/31/2019	$ 6,489,000	$376,000	N/A	$241	N/A	ND	N/A
4	Alarm.Com Holdings, Inc.	ALRM	PWC	Yes	Yes	12/31/2019	$ 502,363	$8,949	ND	$1,900	$4,578	$4,141	$2,444
5	Altair Engineering Inc.	ALTR	EY	Yes	Yes	12/31/2019	$ 458,915	$7,162	ND	N/A	$3,100	ND	$4,500
6	Alteryx, Inc.	AYX	Deloitte	No	Yes	12/31/2019	$ 417,910	N/A	N/D	N/A	$43,035	$20,461	$34,380
7	American Software Inc	AMSWA	KPMG	Yes	No	4/30/2019	$ 108,706	$11,063	$5,961	$4,627	$2,300	ND	$1,300
8	Ansys Inc	ANSS	Deloitte	No	No	12/31/2019	$ 1,515,892	N/A	N/A	N/A	N/A	ND	N/A
9	Appfolio Inc	APPF	PWC	Yes	Yes	12/31/2019	$ 256,012	$30,023	$23,600	$14,000	$2,492	ND	ND
10	Appian Corp	APPN	Other	No	Yes	12/31/2019	$ 260,352	N/A	N/A	N/A	$43,522	$9,319	$15,684
11	Audioeye Inc	AEYE	Other	Yes	Yes	12/31/2019	$ 10,765	$1,717	$307	$279	$270	$298	$240
12	Autodesk Inc	ADSK	EY	No	Yes	1/31/2020	$ 3,274,300	N/A	N/A	N/A	$9,880	ND	$10,160
13	Avalara	AVLR	Deloitte	Yes	Yes	12/31/2019	$ 382,421	$2,300	ND	ND	ND	$38,416	$7,254
14	Avid Technology, Inc.	AVID	Other	Yes	No	12/31/2019	$ 411,788	ND	$1,300	$600	N/A	ND	N/A
15	Aware Inc	AWRE	Other	No	No	12/31/2019	$ 12,204	N/A	N/A	N/A	N/A	ND	N/A
16	Bandwidth Inc.	BAND	EY	Yes	No	12/31/2019	$ 232,594	$17,952	$3,544	$2,024	N/A	ND	N/A
17	Benefitfocus,Inc.	BNFT	EY	Yes	No	12/31/2019	$ 295,686	$46,497	$9,784	$5,130	$6,676	ND	$3,662
18	Bill.Com	BILL	EY	Yes	Yes	6/30/2019	$ 108,351	$ 3,387	$1,600	ND	$4,800	ND	$1,400
19	Blackbaud Inc	BLKB	PWC	Yes	Yes	12/31/2019	$ 900,423	$101,302	$46,874	$21,000	$90,764	ND	$38,100
20	Blackline, Inc.	BL	PWC	Yes	Yes	12/31/2019	$ 288,976	$10,032	$5,100	$4,700	ND	ND	$18,100
21	Bottomline Technologies Inc /De/	EPAY	EY	Yes	No	6/30/2019	$ 421,962	$13,207	$3,700	$3,800	N/A	$6,400	$1,600
22	Box, Inc	BOX	EY	Yes	Yes	1/31/2020	$ 696,264	ND	$7,957	ND	$93,603	$44,000	$25,900
23	Bridgeline Digital, Inc.	BLIN	Other	Yes	Yes	9/30/2019	$ 9,952	N/A	$11	ND	N/A	$70	$39
24	Cadence Design Systems Inc	CDNS	KPMG	Yes	Yes	12/28/2019	$ 2,336,319	ND	ND	ND	$31,600	ND	$29,400
25	Ceridian Hcm Holding Inc.	CDAY	KPMG	Yes	No	12/31/2019	$ 824,100	$70,400	$32,600	$28,300	$106,400	ND	$32,200
26	Channeladvisor Corp	ECOM	EY	Yes	Yes	12/31/2019	$ 129,959	$13,965	$3,000	$800	$18,414	ND	ND
27	Citrix Systems Inc	CTXS	EY	Yes	Yes	12/31/2019	$ 3,010,564	$451,927	$3,400	$19,700	$91,400	ND	$44,800
28	Cloudera, Inc.	CLDR	EY	No	Yes	1/31/2020	$ 794,191	N/A	N/A	N/A	$90,000	ND	$47,600
29	Cloudflare	NET	KPMG	Yes	No	12/31/2019	$ 287,022	ND	$16,000	$6,700	$25,184	$20,065	$10,821
30	Coupa Software Inc	COUP	EY	Yes	Yes	1/31/2020	$ 389,719	$33,326	$8,400	$3,600	$33,903	$26,200	$9,600
31	Crowdstrike	CRWD	PWC	Yes	Yes	1/31/2020	$ 481,413	$ 13,400	$8,100	$6,200	$114,206	$86,594	$35,500
32	Datadog	DDOG	Deloitte	Yes	No	12/31/2019	$ 362,780	$ 24,630	$10,128	ND	$25,755	$20,146	$5,400
33	Docusign	DOCU	PWC	Yes	No	1/31/2020	$ 973,971	$33,373	$17,100	$4,100	$155,697	$99,392	$58,192
34	Dropbox, Inc.	DBX	EY	No	Yes	12/31/2019	$ 1,661,300	N/A	N/A	N/A	$63,400	$28,100	$17,500
35	Dynatrace, Inc.	DT	Other	Yes	Yes	3/31/2019	$ 430,966	$ 188,608	$1,900	$6,800	$59,250	$43,212	$23,244
36	Egain Corp	EGAN	Other	No	Yes	6/30/2019	$ 67,232	N/A	N/A	N/A	$2,500	$809	$663
37	Electronic Arts Inc.	EA	KPMG	Yes	No	3/31/2019	$ 4,950,000	$37,000	ND	ND	N/A	ND	N/A
38	Endurance International Group Hol	EIGI	Other	Yes	Yes	12/31/2019	$ 1,113,278	$109,546	$13,400	ND	ND	ND	ND
39	Everbridge, Inc.	EVBG	KPMG	Yes	No	12/31/2019	$ 200,882	$14,827	$8,800	$7,000	ND	ND	$8,000
40	Fastly, Inc	FSLY	Deloitte	Yes	Yes	12/31/2019	$ 200,462	$ 8,500	ND	$2,200	$6,804	ND	$2,300
41	Globalscape Inc	GSB	Other	Yes	Yes	12/31/2019	$ 40,343	$2,650	$1,074	$1,557	$943	$812	$878
42	Guidewire Software, Inc.	GWRE	KPMG	Yes	Yes	7/31/2019	$ 719,514	$7,374	$3,936	$100	$30,400	ND	$5,500
43	Hubspot Inc	HUBS	PWC	Yes	Yes	12/31/2019	$ 674,860	$16,793	$15,500	$11,600	$51,188	$9,400	$32,800
44	Inspired Entertainment, Inc.	INSE	Other	Yes	No	12/31/2019	$ 153,400	$46,900	$23,500	$16,400	N/A	ND	N/A
45	Instructure Inc	INST	EY	Yes	Yes	12/31/2019	$ 258,473	$27,420	ND	$6,021	$22,559	ND	$11,919
46	Intellicheck, Inc.	IDN	Other	No	No	12/31/2019	$ 7,664	N/A	N/A	N/A	N/A	ND	N/A
47	Intelligent Systems Corp	INS	Other	No	No	12/31/2019	$ 34,303	N/A	N/A	N/A	N/A	ND	N/A
48	Intuit Inc	INTU	EY	Yes	No	7/31/2019	$ 6,784,000	$79,000	ND	ND	N/A	ND	N/A
49	Logmein, Inc.	LOGM	Deloitte	Yes	Yes	12/31/2019	$ 1,260,385	$39,181	$39,900	$33,340	$102,800	ND	$41,800
50	Mam Software Group, Inc.	MAMS	Other	Yes	Yes	6/30/2019	$ 37,714	$9,487	$567	ND	ND	$300	$100
51	Manhattan Associates Inc	MANH	EY	No	Yes	12/31/2019	$ 617,949	N/A	N/A	N/A	$10,400	ND	$1,900
52	Medallia, Inc.	MDLA	EY	Yes	Yes	1/31/2020	$ 402,463	$ 1,700	ND	ND	$73,995	$41,400	$19,000
53	Microsoft Corp	MSFT	Deloitte	Yes	No	6/30/2019	$ 125,843,000	ND	ND	ND	N/A	ND	N/A
54	Microstrategy Inc	MSTR	KPMG	Yes	Yes	12/31/2019	$ 486,327	ND	ND	$0	$4,800	ND	$2,900

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55	Mobileiron, Inc.	MOBL	Deloitte	No	Yes	12/31/2019	$ 205,236	N/A	N/A	N/A	$17,902	$18,333	$17,364
56	Mongodb, Inc.	MDB	PWC	No	Yes	1/31/2020	$ 421,720	N/A	N/A	N/A	$77,000	ND	$19,400
57	Mtbc, Inc.	MTBC	Other	Yes	Yes	12/31/2019	$ 64,439	ND	$538	ND	ND	$29	ND
58	National Instruments Corp	NATI	EY	Yes	No	12/31/2019	$ 1,353,215	$55,879	$10,000	$28,000	N/A	ND	N/A
59	Netsol Technologies Inc	NTWK	Other	No	No	6/30/2019	$ 67,819	N/A	N/A	N/A	N/A	ND	N/A
60	Nuance Communications, Inc.	NUAN	Other	Yes	No	9/30/2019	$ 1,823,100	$28,500	ND	$6,700	$23,800	ND	$16,200
61	Nutanix, Inc.	NTNX	Deloitte	No	Yes	7/31/2019	$ 1,236,143	N/A	N/A	N/A	$153,712	$158,062	$118,729
62	Okta, Inc.	OKTA	EY	Yes	Yes	1/31/2020	$ 586,067	$9,943	$5,100	$4,900	$111,500	$61,300	$28,600
63	Oracle Corp	ORCL	EY	No	Yes	5/31/2019	$ 39,506,000	N/A	N/A	N/A	ND	ND	ND
64	Pagerduty, Inc.	PD	EY	Yes	Yes	1/31/2020	$ 166,351	$ 389	ND	ND	$25,688	$15,996	$7,780
65	Paycom Software, Inc.	PAYC	Other	Yes	Yes	12/31/2019	$ 737,671	$99,125	$30,400	$19,000	$194,964	$60,669	$24,694
66	Paylocity Holding Corp	PCTY	KPMG	Yes	No	6/30/2019	$ 467,633	$27,486	$23,300	$16,900	N/A	ND	N/A
67	Ping Identity Holding Corp.	PING	PWC	Yes	Yes	12/31/2019	$ 242,898	$ 15,506	$10,460	ND	$13,670	$9,060	$6,423
68	Progress Software Corp /Ma	PRGS	Deloitte	Yes	No	11/30/2019	$ 413,298	$276	N/A	$0	N/A	ND	N/A
69	Ptc Inc.	PTC	PWC	Yes	Yes	9/30/2019	$ 1,255,631	$0	N/A	ND	$92,500	ND	N/A
70	Qad Inc	QADA	KPMG	Yes	Yes	1/31/2020	$ 333,016	$1,598	$1,067	$600	$11,000	$4,500	$3,600
71	Qualys, Inc.	QLYS	Other	Yes	No	12/31/2019	$ 321,607	$2,000	$1,000	ND	$9,022	ND	$2,000
72	Qumu Corp	QUMU	Other	No	Yes	12/31/2019	$ 25,362	N/A	N/A	N/A	$518	ND	$1,900
73	Rapid7, Inc.	RPD	KPMG	Yes	Yes	12/31/2019	$ 326,947	ND	$6,100	ND	$51,260	$26,109	$14,804
74	Realpage Inc	RP	EY	Yes	Yes	12/31/2019	$ 988,136	$66,500	ND	$14,800	$18,333	ND	$8,700
75	Red Violet, Inc.	RDVT	Other	Yes	No	12/31/2019	$ 30,286	$24,034	$6,700	$2,637	N/A	ND	N/A
76	Rosetta Stone Inc	RST	Deloitte	Yes	Yes	12/31/2019	$ 182,702	ND	$15,754	$110	$19,240	ND	$24,771
77	Sailpoint Technologies Holdings, In	SAIL	Other	No	Yes	12/31/2019	$ 288,515	N/A	N/A	N/A	$35,152	$17,239	$10,130
78	Salesforce Com Inc	CRM	EY	Yes	Yes	1/31/2020	$ 17,098,000	ND	ND	ND	$2,300,000	$1,100,000	$900,000
79	Secureworks Corp	SCWX	PWC	No	Yes	1/31/2020	$ 552,765	N/A	N/A	N/A	$62,785	$19,053	$19,163
80	Servicenow, Inc.	NOW	PWC	Yes	Yes	12/31/2019	$ 3,460,437	ND	ND	N/A	$508,487	$255,605	$168,014
81	Shotspotter, Inc	SSTI	Other	No	Yes	12/31/2019	$ 40,752	N/A	N/A	N/A	$2,332	ND	$500
82	Slack Technologies Inc	WORK	KPMG	Yes	Yes	1/31/2020	$ 630,422	$ 4,241	$0	$500	$11,200	$23,600	$8,200
83	Smartsheet	SMAR	PWC	Yes	Yes	1/31/2020	$ 270,882	ND	$8,100	$2,300	$48,255	$39,046	$19,806
84	Smith Micro Software, Inc.	SMSI	Other	No	No	12/31/2019	$ 43,346	N/A	N/A	N/A	N/A	ND	N/A
85	Solarwinds Corporation	SWI	PWC	Yes	Yes	12/31/2019	$ 932,525	$7,900	ND	$3,500	$10,624	$7,888	$2,421
86	Splunk Inc	SPLK	PWC	Yes	Yes	1/31/2020	$ 2,358,926	$3,500	$2,589	N/A	$188,062	$149,426	$104,353
87	Sprout Social, Inc	SPT	PWC	No	Yes	12/31/2019	$ 102,707	N/A	N/A	N/A	$11,079	$8,170	$4,812
88	Sps Commerce Inc	SPSC	KPMG	Yes	Yes	12/31/2019	$ 279,124	ND	ND	ND	$46,941	$49,883	$48,417
89	Square, Inc.	SQ	EY	Yes	No	12/31/2019	$ 4,713,500	$81,984	$22,500	$18,900	N/A	ND	N/A
90	Ss&C Technologies Holdings Inc	SSNC	PWC	Yes	Yes	12/31/2019	$ 4,632,900	$98,300	$67,400	$19,000	ND	ND	ND
91	Survey Monkey	SVMK	EY	Yes	Yes	12/31/2019	$ 307,421	$ 33,156	ND	$15,600	$8,462	ND	$2,700
92	Symantec Corp	SYMC	KPMG	Yes	Yes	3/30/2019	$ 4,731,000	$104,000	ND	ND	$185,000	ND	$100,000
93	Synopsys Inc	SNPS	KPMG	Yes	No	10/31/2019	$ 3,360,694	$4,515	$4,259	$2,868	$86,400	ND	$62,800
94	Tenable Holdings, Inc.	TENB	EY	Yes	Yes	12/31/2019	$ 354,586	ND	$4,200	ND	$72,265	$40,172	$27,341
95	Teradata Corporation	TDC	PWC	Yes	Yes	12/31/2019	$ 1,899,000	$36,000	$5,000	$7,000	$91,000	$57,000	$20,000
96	Twilio Inc	TWLO	KPMG	Yes	Yes	12/31/2019	$ 1,134,468	$100,155	$29,700	$17,100	$30,400	ND	$4,500
97	Upland Software, Inc.	UPLD	EY	No	Yes	12/31/2019	$ 222,637	N/A	N/A	N/A	$11,822	$8,199	$3,080
98	Varonis Systems Inc	VRNS	EY	No	Yes	12/31/2019	$ 254,190	N/A	N/A	N/A	$3,725	$19,132	$13,630
99	Veeva Systems Inc	VEEV	KPMG	Yes	Yes	1/31/2020	$ 1,104,081	ND	$1,208	ND	$35,600	ND	$20,500
100	Vmware, Inc.	VMW	PWC	Yes	Yes	1/31/2020	$ 10,811,000	ND	ND	ND	$951,000	ND	$354,000
101	Where Food Comes From, Inc.	WFCF	Other	Yes	No	12/31/2019	$ 20,774	$921	ND	$256	N/A	ND	N/A
102	Workiva Inc	WK	EY	No	Yes	12/31/2019	$ 297,891	N/A	N/A	N/A	$29,085	$10,268	$15,200
103	Zedge, Inc.	ZDGE	Other	Yes	No	7/31/2019	$ 8,816	$9,555	ND	ND	N/A	ND	N/A
104	Zoom Video Communications, Inc.	ZM	KPMG	Yes	Yes	1/31/2020	$ 622,658	ND	$3,100	ND	$91,130	$72,715	$37,101
105	Zscaler	ZS	PWC	Yes	Yes	7/31/2019	$ 302,836	ND	$3,700	$1,000	$69,785	$32,526	$18,651
106	Zuora, Inc.	ZUO	KPMG	Yes	Yes	1/31/2020	$ 276,057	$ 6,300	$4,600	$2,600	$29,200	$11,411	$9,515

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
1	**3D Systems Corp**	Footnotes have no discussion of capitalization of SW development costs	We generally expense sales commissions when incurred because the amortization period would be one year or less. These costs are recorded within selling, general and administrative expenses.	Footnotes have no discussion of ASU 2018-15
2	**Aci Worldwide, Inc.**	Software may be for internal use or for resale. Costs related to certain software, which is for resale, are capitalized in accordance with Accounting Standards Codification ("ASC") 985-20, Costs of Software to be Sold, Leased, or Marketed, when the resulting product reaches technological feasibility. The Company generally determines technological feasibility when it has a detailed program design that takes product function, feature and technical requirements to their most detailed, logical form and is ready for coding. The Company does not typically capitalize costs related to software for resale as technological feasibility generally coincides with general availability of the software. The Company capitalizes the costs of software developed or obtained for internal use in accordance with ASC 350-40, Internal Use Software. The Company expenses all costs incurred during the preliminary project stage of its development and capitalizes the costs incurred during the application development stage. Costs incurred relating to upgrades and enhancements to the software are capitalized if it is determined that these upgrades or enhancements add additional functionality to the software. Costs incurred during the application development stage include purchased software licenses, implementation costs, consulting costs, and payroll-related costs for projects that qualify for capitalization. All other costs, primarily related to maintenance and minor software fixes, are expensed as incurred.	The Company capitalizes certain of its sales commissions that meet the definition of incremental costs of obtaining a contract and for which the amortization period is greater than one year. The costs associated with those sales commissions are capitalized during the period in which the Company becomes obligated to pay the commissions and are amortized over the period in which the related products or services are transferred to the customer.	Footnotes have no discussion of ASU 2018-15
3	**Activision Blizzard, Inc.**	Software development costs include payments made to independent software developers under development agreements, as well as direct costs incurred for internally developed products. Software development costs are capitalized once the technological feasibility of a product is established and such costs are determined to be recoverable. Technological feasibility of a product requires both technical design documentation and game design documentation, or the completed and tested product design and a working model. Significant management judgments and estimates are utilized in the assessment of when technological feasibility is established and the evaluation is performed on a product-by-product basis. For products where proven technology exists, this may occur early in the development cycle. Software development costs related to online hosted revenue arrangements are capitalized after the preliminary project phase is complete and it is probable that the project will be completed and the software will be used to perform the function intended. Prior to a product's release, if and when we believe capitalized costs are not recoverable, we expense the amounts as part of "Cost of revenues—software royalties, amortization, and intellectual property licenses." Capitalized costs for products that are canceled or are expected to be abandoned are charged to "Product development" in the period of cancellation. Amounts related to software development which are not capitalized are charged immediately to "Product development."	We apply the practical expedient to expense, as incurred, costs to obtain a contract with a customer when the amortization period would have been one year or less for certain similar contracts in which commissions are paid to internal personnel or third parties. We believe application of the practical expedient has a limited effect on the amount and timing of cost recognition.	Footnotes have no discussion of ASU 2018-15
4	**Alarm.Com Holdings, Inc.**	We capitalize the costs directly related to the development of internal-use software for our platforms during the application development stage of the projects. Such costs primarily include payroll and payroll-related costs for engineers and product development employees directly associated with the development project. Our internal-use software is reported at cost less accumulated depreciation. Depreciation begins once the project is ready for its intended use, which is usually when the code goes into production in weekly software builds on our platforms. We depreciate the asset on a straight-line basis over a period of three years, which is the estimated useful life. We update our software for our SaaS multi-tenant platforms on a weekly basis utilizing continuous agile development methods, which primarily consists of bug-fixes and user interface changes. We evaluate whether a project should be capitalized if it adds significant functionality to our platforms. Maintenance activities or minor upgrades are expensed in the period performed.	Our contract assets consist of capitalized commission costs and upfront payments made to customers. The current portion of capitalized commission costs and upfront payments made to customers are included in other current assets within our consolidated balance sheets. The non-current portion of capitalized commission costs and upfront payments made to customers are reflected in other assets within our consolidated balance sheets.	Footnotes have no discussion of ASU 2018-15
5	**Altair Engineering Inc.**	Capitalization of software development costs begins upon the establishment of technological feasibility and ends when the product is available for general release. Generally, the time between the establishment of technological feasibility and commercial release of software is short. As such, all internal software development costs have been expensed as incurred and included in research and development expense in the accompanying consolidated statements of operations.	The Company pays commissions for new software product and PCS sales as well as for renewals of existing software and PCS contracts. Commissions paid to obtain renewal contracts are not commensurate with the commissions paid for new product sales and therefore, a portion of the commissions paid for new contracts relate to future renewals.The Company accounts for new product sales commissions using a portfolio approach and allocates the cost of commissions in proportion to the allocation of transaction price of license and PCS performance obligations. Commissions allocated to the license and license renewal components are expensed at the time the license revenue is recognized. Commissions allocated to PCS are capitalized and amortized on a straight-line basis over a period of four years, reflecting the Company's estimate of the expected period that it will benefit from those commissions.	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 clarifies and 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.The amendments are effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years; early adoption is permitted. The Company is currently evaluating the impact of the new guidance on its consolidated financial statements and related disclosures.
6	**Alteryx, Inc.**	Costs incurred in the development of new software products and enhancements to existing software products to be accounted for under software revenue recognition guidance are accounted for in accordance with ASC 985-20, Costs of Software to be Sold, Leased, or Marketed, or ASC 985-20. These costs, consisting primarily of salaries and related payroll costs, are expensed as incurred until technological feasibility has been established. After technological feasibility is established, costs are capitalized in accordance with ASC 985-20.	Footnotes have no discussion of capitalization of commissions	In August 2018, the FASB issued ASU 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract, which aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing costs incurred to develop or obtain internal-use software. This guidance will be effective for us for annual reporting periods beginning after December 15, 2019 and for interim periods within those annual periods, and can be applied either retrospectively or prospectively to all implementation costs after the date of adoption. Early adoption is permitted. We currently plan to adopt this new accounting standard prospectively. As a result of the adoption, we will be required to capitalize additional costs related to the implementation of cloud computing arrangements that we have historically expensed as incurred.
7	**American Software Inc**	The Company capitalizes certain computer software development costs in accordance with the Costs of Software to be Sold, Leased or Marketed Topic of the FASB ASC. Costs incurred internally to create a computer software product or to develop an enhancement to an existing product are charged when incurred as research and development expense until technological feasibility for the respective product is established. Thereafter, software development costs are capitalized and reported at the lower of unamortized cost or net realizable value. Capitalization ceases when the product or enhancement is available for general release to customers. The Company makes ongoing evaluations of the recoverability of its capitalized software projects by comparing the net amount capitalized for each product to the estimated net realizable value of the product. If such evaluations indicate that the unamortized software development costs exceed the net realizable value, the Company writes off the amount by which the unamortized software development costs exceed net realizable value. Capitalized computer software development costs are amortized ratably based on the projected revenues associated with the related software or on a straight-line basis over three years, whichever method results in a higher level of amortization. Amortization of capitalized computer software development costs is included in the cost of license revenues in the consolidated statements of operations.	The Company capitalizes the incremental costs of obtaining a contract with a customer if the Company expects to recover those costs. The incremental costs of obtaining a contract are those that the Company incurs to obtain a contract with a customer that it would not have incurred if the contract had not been obtained (for example, a sales commission). The Company capitalizes the costs incurred to fulfill a contract only if those costs meet all of the following criteria: •The costs relate directly to a contract or to an anticipated contract that the Company can specifically identify. •The costs generate or enhance resources of the Company that will be used in satisfying (or in continuing to satisfy) performance obligations in the future. •The costs are expected to be recovered. Certain sales commissions incurred by the Company were determined to be incremental costs to obtain the related contracts, which are deferred and amortized ratably over the economic benefit period. These deferred commission costs are classified as current or non-current based on the timing of when the Company expects to recognize the expense. The current and non-current portions of deferred commissions are included in prepaid expenses and other current assets and other long-term assets, respectively, in the Company's consolidated balance sheets.	
8	**Ansys Inc**	Research and development costs are expensed as incurred. Internally developed software costs required to be capitalized as defined by the accounting guidance are not material to our consolidated financial statements.	Footnotes have no discussion of capitalization of commissions	In August 2018, the FASB issued ASU No. 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* (ASU 2018-15). The standard aligns the accounting for costs incurred to implement a cloud computing arrangement (CCA) that is a service arrangement with the guidance on capitalizing costs associated with developing or obtaining internal-use software. Under ASU 2018-15, an entity would apply Subtopic 350-40 to determine which implementation costs related to a CCA that is a service contract should be capitalized. The standard does not change the accounting for the service component of a CCA. The associated cash flows will be reflected within operating activities.
9	**Appfolio Inc**	Software development costs consist of certain payroll and stock compensation costs incurred to develop functionality of our internal-use software solutions. We capitalize certain software development costs for new offerings as well as significant upgrades and enhancements to our existing software solutions. Capitalized software development costs are amortized using the straight-line method over an estimated useful life of three years. We do not transfer ownership of our software, or lease our software, to third parties. We believe there are two key estimates within the capitalized software balance, which are the determination of the useful life of the software and the determination of the amounts to be capitalized. We determined that a three year life is appropriate for our internal-use software based on our best estimate of the useful life of the internally developed software after considering factors such as continuous developments in the technology, obsolescence and anticipated life of the service offering before significant upgrades. Based on our prior experience, internally generated software will generally remain in use for a minimum of three years before being significantly replaced or modified to keep up with evolving customer and company needs. While we do not anticipate any significant changes to this three year estimate, a change in this estimate could produce a material impact on our financial statements. We determine the amount of internal software costs to be capitalized based on the amount of time spent by our software engineers on projects. Costs associated with building or significantly enhancing our software solutions and new internally built software solutions are capitalized, while costs associated with planning new developments and maintaining our software solutions are expensed as incurred. There is judgment involved in estimating the stage of development as well as estimating time allocated to a particular project. A significant change in the time spent on each project could have a material impact on the amount capitalized and related amortization expense in subsequent periods.	Footnotes have no discussion of capitalization of commissions	In August 2018, the FASB issued ASU No. 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 ("ASU 2018-15"), a series of amendments which align 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 (and hosting arrangements that include an internal use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by these amendments. For public business entities, the amendments are effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2019. We adopted ASU 2018-15 on January 1, 2020, on a prospective basis for all implementation costs incurred after the date of adoption. We do not expect the adoption of this guidance will have a material impact on our financial condition, results of operations, cash flows or disclosures.

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
10	Appian Corp	Since our software is sold and licensed externally, we consider our software as external-use software for purposes of applying the capitalized software development guidance. Product development costs are expensed as incurred until technological feasibility has been established, which we define as the completion of all planning, designing, coding and testing activities that are necessary to establish products that meet design specifications including functions, features and technical performance requirements. We have determined that technological feasibility for our software products is reached shortly before they are released for sale. Costs incurred after technological feasibility is established are not significant, and accordingly we expense all research and development costs when incurred.	We capitalize the incremental costs of obtaining a contract with a customer, including, sales commissions paid to our direct sales force that are incremental costs to obtaining customer contracts. These costs are recorded as deferred commissions in the consolidated balance sheets. Costs to obtain a contract for a new customer or up-sell are amortized on a straight-line basis over an estimated economic life of five years as sales commissions on initial sales are not commensurate with sales commissions on contract renewals. We determined the estimated economic life based on both qualitative and quantitative factors, such as expected renewals, product life cycles, contractual terms and customer attrition. We periodically review the carrying amount of deferred contract acquisition costs to determine whether events or changes in circumstances have occurred that could impact the estimated economic life. Commissions paid relating to contract renewals are deferred and amortized on a straight-line basis over the related renewal period. We also capitalize the incremental fringe benefits associated with commission expenses paid to our direct sales force. Costs to obtain a contract for professional services arrangements are expensed as incurred in accordance with the practical expedient as the contractual period of our professional services arrangements are one year or less.	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, which aligns the requirements for capitalizing implementation costs in cloud computing arrangements with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Entities can chooseto adopt the new guidance prospectively or retrospectively. We do not expect the standard to have a material impact on our consolidated financial statements.
11	Audioeye Inc	In accordance with ASC 350-40, the Company capitalizes certain computer software and software development costs incurred in connection with developing or obtaining computer software for internal use when both the preliminary project stage is completed, and it is probable that the software will be used as intended. Capitalized software costs include only (i) external direct costs of materials and services utilized in developing or obtaining computer software, (ii) compensation and related benefits for employees who are directly associated with the software project and (iii) any interest costs incurred while developing internal-use computer software. Capitalized software costs are included in intangible assets on our balance sheet and amortized on a straight-line basis when placed into service over the estimated useful lives of the software.	The most significant impact of the standard relates to capitalizing costs to acquire contracts, which have historically been expensed as incurred. Under the standard, only the initial payment is subject to capitalization as the deferred payments require a substantive performance condition of the employee. These initial commission payments are now capitalized in the period a customer contract is obtained and payment is received; and will be amortized consistent with the transfer of the goods or services to the customer over the expected period of benefit. The expected period of benefit is the contract term, except when the commission payment is expected to provide economic benefit to the Company for a period longer than the contract term, such as for new customer or incremental sales where renewals are expected, and renewal commissions are not commensurate with initial commissions. Such commissions are amortized over the greater of contract term or technological obsolescence period when the underlying contracted products are technology-based, such as for the SaaS-based platforms, or the expected customer relationship period when the underlying contracted products are not technology-based, such as for patient experience survey products.	In August 2018, the FASB issued ASU No. 2018-15, related to implementation costs incurred in a cloud computing arrangement that is a service contract. This standard 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.The guidance in ASU No. 2018-15 is required for annual reporting periods, including interim periods within those annual periods, beginning after December 15, 2019, for public business entities, with early adoption permitted. The Company adopted this guidance on January 1, 2020 with prospective application, as permitted by the ASU. The Company does not expect the adoption to have a significant impact on its consolidated financial statements.
12	Autodesk Inc	Software development costs for hosting customer transactions (i.e., cloud-based software solutions) are capitalized once the project is in the application development stage in accordance with the accounting guidance for internal-use software. These capitalized costs include external direct costs of services consumed in developing or obtaining the software and personnel expenses for employees who are directly associated with the development. Capitalization of these costs concludes once the project is substantially complete and the software is ready for its intended purpose. Post-configuration training and maintenance costs are expensed as incurred. Capitalized software development costs are amortized on a straight-line basis over the estimated useful life, generally 6 years. In circumstances where software is developed for both cloud-based software solutions and for the purpose of being sold, leased, or otherwise marketed (i.e., customer hosted software), capitalization of development costs occurs after technological feasibility of the software is established and continues until the product is available for general release to customers. Since the Company's developed software is available for general release concurrent with the establishment of technological feasibility, development costs are not capitalized in these circumstances.	The Company recognizes an asset for the incremental costs of obtaining a contract with a customer if it expects the benefit of those costs to be longer than one year. The Company has determined that certain costs related to employee sales incentive programs (sales commissions) and partner commission programs represent incremental costs of obtaining a contract and therefore should be capitalized. Capitalized costs are included in deferred commissions on the consolidated balance sheets. These deferred commissions are amortized over an estimated period of benefit, generally six years. The Company determines the period of benefit by taking into consideration past experience with customers, the expected life of acquired technology that generates revenue, industry peers, and other available information. The period of benefit is generally longer than the term of the initial contract because of anticipated renewals. The Company elected to apply the practical expedient to recognize the incremental costs of obtaining a contract as an expense if the amortization period of the asset would have been one year or less.	Footnotes have no discussion of ASU 2018-15
13	Avalara	Software development costs incurred prior to the establishment of technological feasibility are included in research and development expenses. Autodesk defines establishment of technological feasibility as the completion of a working model. Software development costs incurred subsequent to the establishment of technological feasibility through the period of general market availability of the products are capitalized and generally amortized over a three-year period, if material.	Sales commissions earned by our internal sales personnel and our reseller partners are considered incremental and recoverable costs of obtaining a contract with a customer. The commission costs are capitalized and included in "Prepaid expenses and other current assets" and "Other assets" on our Consolidated Balance Sheets. The deferred costs are then amortized over the period of benefit. Autodesk determined that sales commissions earned by internal sales personnel that are related to contract renewals are commensurate with sales commissions earned on the initial contracts, and we determined the period of benefit to be the term of the respective customer contract. Commissions paid to our reseller partners that are related to contract renewals are not commensurate with commissions earned on the initial contract, and we determined the estimated period of benefit by taking into consideration customer retention data, customer contracts, our technology and other factors. Deferred costs are periodically reviewed for impairment. Amortization expense is included in sales and marketing expenses in the Consolidated Statements of Operations.	Footnotes have no discussion of ASU 2018-15
14	Avid Technology, Inc.	Research and development costs are expensed as incurred. Development costs for software to be sold that are incurred subsequent to the establishment of technological feasibility, but prior to the general release of the product, are capitalized. We periodically evaluate the assets, considering a number of business and economic factors, to determine if an impairment exists.	We are applying the practical expedient for the deferral of sales commissions and other contract acquisition costs, which are expensed as incurred, because the amortization period would be one year or less.	Footnotes have no discussion of ASU 2018-15
15	Aware Inc	We capitalize certain internally developed software development costs after technological feasibility of the product has been established.	We recognize an other asset for the incremental costs of obtaining a contract with a customer if we expect the benefit of those costs to be longer than one year. We have determined that certain sales commissions meet the requirements to be capitalized, and we amortize these costs on a consistent basis with the pattern of transfer of the goods and services in the contract. Total capitalized costs to obtain a contract were immaterial during the periods presented and are included in other current and long-term assets on our consolidated balance sheets.	Footnotes have no discussion of ASU 2018-15
16	Bandwidth Inc.	Internal-use software includes software that has been acquired, internally developed, or modified exclusively to meet the Company's needs. We capitalize qualifying internal-use software development costs that are incurred during the application development stage. Capitalization of costs begins when two criteria are met: (i) the preliminary project stage is completed and (ii) it is probable that the software will be completed and used for its intended function. Capitalization ceases when the software is substantially complete and ready for its intended use, including the completion of all significant testing. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality and expense costs incurred	Commissions consist of variable compensation earned by sales personnel and third-party resellers. Sales commissions associated with the acquisition of a new customer contract are paid over time, based on monthly revenues, and are recognized as sales and marketing expense in the period incurred.	In August 2018, the FASB issued ASU 2018-15, Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract. This standard 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 will be effective for the Company in interim and annual reporting periods beginning after December 15, 2019. The Company is currently evaluating the impact of the adoption of this standard on its consolidated financial statements.
17	Benefitfocus,Inc.	ng the application development stage, including upgrades and enhancements representing modifications that will result in significant additional functionality, are capitalized. Software maintenance and training costs are expensed as incurred. The Company evaluates these assets for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.	Footnotes have no discussion of capitalization of commissions	
18	Bill.Com	The Company capitalizes internal and external direct costs incurred related to obtaining or developing internal-use software. Costs incurred during the application development stage are capitalized and are amortized using the straight-line method over the estimated useful lives of the software, generally three years commencing on the first day of the month following when the software is ready for its intended use. Costs related to planning and post-implementation activities are expensed as incurred.	Deferred costs include deferred sales commissions that are incremental costs of obtaining customer contracts. We amortize deferred sales commissions ratably over the estimated period of our relationship with new customers of four to six years. Based on historical experience, we determine the average life of our customer relationship by taking into consideration our customer contracts and the estimated technological life of our platform and related significant features.	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, which requires implementation costs incurred in a hosting arrangement that is a service contract to be capitalized and amortized over the term of the hosting arrangement. ASU 2018-15 is effective for nonpublic business entities in fiscal years beginning after December 15, 2020, and interim periods within annual periods beginning December 15, 2021. Early adoption is permitted. The Company is still evaluating the impact of this amendment on its consolidated financial statements.
19	Blackbaud Inc	We incur certain costs associated with the development of internal-use software, which are primarily related to activities performed to develop our cloud solutions. Internal and external costs incurred in the preliminary project stage of internal-use software development are expensed as incurred. Once the software being developed has reached the application development stage, qualifying internal costs including payroll and payroll-related costs of employees who are directly associated with and devote time to the software project as well as external direct costs of materials and services are capitalized. Capitalization ceases at the point at which the developed software is substantially complete and ready for its intended use, which is typically upon completion of all substantial testing. Qualifying capitalized software development costs are amortized on a straight-line basis over the software asset's estimated useful life, which is generally 3 to 7 years. We evaluate the useful lives of these assets on an annual basis and test for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. We write off the gross carrying amount and accumulated amortization balances for all fully amortized software development cost assets.	We pay sales commissions at the time contracts with customers are signed or shortly thereafter, depending on the size and duration of the sales contract. Sales commissions and related fringe benefits earned by our sales force are considered incremental and recoverable costs of obtaining a contract with a customer. These costs are deferred and then amortized in a manner that aligns with the expected period of benefit, which we have determined to be five years. We do not generally pay commissions for contract renewals. The related amortization expense is included in sales, marketing and customer success expense in our consolidated statements of comprehensive income.	Footnotes have no discussion of ASU 2018-15
20	Blackline, Inc.	We account for the costs of computer software obtained or developed for internal use in accordance with ASC 350, Intangibles—Goodwill and Other ("ASC 350"). We capitalize certain implementation costs incurred in a hosting arrangement that is a service contract. These capitalized costs exclude training costs, project management costs, and data migration costs. We capitalize certain costs in the development of our SaaS subscription solutions when (i) the preliminary project stage is completed, (ii) management has authorized further funding for the completion of the project and (iii) it is probable that the project will be completed and performed as intended. These capitalized costs include personnel and related expenses for employees and costs of third-party contractors who are directly associated with and who devote time to internal-use software projects and, when material, interest costs incurred during the development. Capitalization of these costs ceases once the project is substantially complete and the software is ready for its intended purpose. Costs incurred for significant upgrades and enhancements to our SaaS software solutions are also capitalized. Costs incurred for post-configuration training, maintenance and minor modifications or enhancements are expensed as incurred.	We recognize an asset for the incremental and recoverable costs of obtaining a contract with a customer if we expect the benefit of those costs to be one year or longer. We have determined that certain sales incentive programs to our employees ("deferred customer contract acquisition costs") and our partners ("partner referral fees") meet the requirements to be capitalized. Deferred customer acquisition costs related to new revenue contracts and upsells are deferred and then amortized straight line over the expected period of benefit that we have determined to be five years, based upon both the product turnover rate and estimated customer life. Partner referral fees are deferred and then amortized on a straight-line basis over the related contractual period, as the fees for renewals are commensurate with fees incurred for the initial contract. Deferred customer acquisition costs and partner referral fees are included within other assets and prepaid expenses and other current assets, respectively, on the consolidated balance sheets. There were no impairment losses in relation to the costs capitalized for the periods presented.	Footnotes have no discussion of ASU 2018-15
21	Bottomline Technologies Inc /De/	We capitalize certain software development costs under accounting frameworks that differ based on the nature of the software. Capitalization of software development costs for software that is to be sold, leased or otherwise marketed begins upon the establishment of technological feasibility. The establishment of technological feasibility and the ongoing assessment of recoverability of capitalized software development costs requires considerable judgment by us with respect to certain factors, including, but not limited to, determining which projects and development activities within those projects qualify for capitalization, anticipated future gross revenues, estimated economic life, and changes in software and hardware technologies. Amortization of capitalized costs commence on the date of general release of the software using the greater of the straight-line methoc over the estimated useful life, or the ratio of revenue in the period to total expected revenues over the product's expected useful life.	We capitalize incremental costs incurred in connection with obtaining a contract if they have a period of benefit that is greater than one year and we expect to recover the costs through future contract revenues. Incremental costs incurred to obtain a contract relate to sales commissions. We also capitalize costs incurred in fulfilling a contract when the costs relate directly to a specifically identifiable customer contract, when the costs generate or enhance resources that we will use to satisfy performance obligations in the future and when the costs are expected to be recovered through future contract revenues.	Footnotes have no discussion of ASU 2018-15

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
22	**Box, Inc**	We capitalize costs to develop software for internal use incurred during the application development stage. Costs related to preliminary project activities and post implementation activities are expensed as incurred. Once an application has reached the development stage, qualifying internal and external costs are capitalized until the application is substantially complete and ready for its intended use. Capitalized qualifying costs are amortized on a straight-line basis when the software is ready for its intended use over an estimated useful life, which is generally three years. Internal-use software costs also include on-premises software, which is amortized over the lesser of five years or the license term. We evaluate the useful lives of these assets on an annual basis and test for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.	Sales commissions earned by our sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for new contracts are deferred and then amortized on a straight-line basis over a period of benefit that we have estimated to be five years. We determined the period of benefit by taking into consideration our customer contracts, our technology and other factors. Sales commissions for renewal contracts are deferred and then amortized on a straight-line basis over the related contractual renewal period. Amortization expense is included in sales and marketing expenses on the consolidated statements of operations.	Footnotes have no discussion of ASU 2018-15
23	**Bridgeline Digital, Inc.**	Costs for research and development of a software product to sell, lease or otherwise market are charged to operations as incurred until technological feasibility has been established. Once technological feasibility has been established, certain software development costs incurred during the application development stage are eligible for capitalization. Based on the Company's software product development process, technological feasibility is established upon completion of a working model. Capitalization ceases when a product is available for general release to customers. Capitalization costs are included in other assets in the consolidated financial statements.	The incremental direct costs of obtaining a contract, which primarily consist of sales commissions paid for new subscription contracts are deferred and amortized on a straight-line basis over a period of approximately three years. The Company evaluated both qualitative and quantitative factors, including the estimated life cycles of its offerings, renewal rates, and its customer attrition to determine the amortization periods for the capitalized costs. The initial amortization period will general be the customer contract term, which is typically thirty-six (36) months, with some exceptions. Deferred capitalized commission expense that will be recognized as expense during the succeeding 12-month period is recognized as current deferred capitalized commission costs, and the remaining portion is recognized as long-term deferred capitalized commission costs. Current deferred capitalized commission costs are included in Other current assets in the Consolidated Balance Sheets and noncurrent deferred capitalized commission costs are included in Other assets in the Consolidated Balance Sheets.	n August 2018, the FASB issued ASU 2018-15, which addresses a customer's accounting for implementation costs incurred in a cloud computing arrangement that is a service contract. Under the new guidance, customers will apply the same criteria for capitalizing implementation costs as they would for an arrangement that has a software license. ASC 2018-15 is effective for annual reporting periods beginning after December 15, 2019, including interim reporting periods within those annual reporting periods. Early adoption is permitted. The Company is currently evaluating the impact of the new guidance on its consolidated financial statements and related disclosures.
24	**Cadence Design Systems Inc**	Cadence capitalizes certain costs of software developed for internal use. Capitalization of software developed for internal use begins at the application development phase of the project. Amortization begins when the computer software is substantially complete and ready for its intended use. Software development costs are capitalized beginning when a product's technological feasibility has been established by completion of a working model of the product and amortization begins when a product is available for general release to customers. The period between the achievement of technological feasibility and the general release of Cadence's products has typically been of short duration.	Cadence records an asset for the incremental costs of obtaining a contract with a customer, including direct sales commissions that are earned upon execution of the contract. Cadence uses the portfolio method to recognize the amortization expense related to these capitalized costs related to initial contracts and renewals and such expense is recognized over a period associated with the revenue of the related portfolio, which is generally two to three years for Cadence's software arrangements and upon delivery for its hardware and IP arrangements. Incremental costs related to initial contracts and renewals are amortized over the period of the arrangement in each case because Cadence pays the same commission rate for both new contracts and renewals. Deferred sales commissions are tested for impairment on an ongoing basis when events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment is recognized to the extent that the amount of deferred sales commission exceeds the remaining expected gross margin (remaining revenue less remaining direct costs) on the goods and services to which the deferred sales commission relates.	In August 2018, the FASB issued ASU 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract," which clarifies the accounting for implementation costs in cloud computing arrangements. The new standard aligns the treatment of implementation costs incurred by customers in cloud computing arrangements that are service contracts with the treatment of similar costs incurred to develop or obtain internal-use software. Under the new standard, implementation costs are deferred and presented in the same line item as a prepayment of related arrangement fees. The deferred costs are recognized over the term of the arrangement in the same line item as the related fees of the arrangement. The new standard is effective for us in the first quarter of fiscal 2020 and will be applied prospectively to costs incurred after the date of adoption. The adoption of this standard will not have a significant impact on our consolidated financial statements or the related disclosures.
25	**Ceridian Hcm Holding Inc.**	In accordance with Accounting Standards Codification ("ASC") Topic 350, we capitalize costs associated with software developed or obtained for internal use when both the preliminary project stage is completed and our management has authorized further funding for the project, which it deems probable of completion. Capitalized software costs include only: (1) external direct costs of materials and services consumed in developing or obtaining the software; (2) payroll and payroll-related costs for employees who are directly associated with and who devote time to the project; and (3) interest costs incurred while developing the software. Capitalization of these costs ceases no later than the point at which the project is substantially complete and ready for its intended purpose. We do not include general and administrative costs and overhead costs in capitalizable costs. Research and development costs, product management, and other software maintenance costs related to software development are expensed as incurred.	Footnotes have no discussion of capitalization of commissions	Footnotes have no discussion of ASU 2018-15
26	**Channeladvisor Corp**	The Company capitalizes certain internal-use software development costs, consisting primarily of direct labor associated with creating the internally developed software and third-party consulting fees associated with implementing software purchased for internal use. Software development projects generally include three stages: the preliminary project stage (in which all costs are expensed as incurred), the application development stage (in which certain costs are capitalized) and the post-implementation/operation stage (in which all costs are expensed as incurred). The costs incurred during the application development stage primarily include the costs of designing the application, coding and testing of the system. Capitalized costs are amortized using the straight-line method over the estimated useful life of the software once it is ready for its intended use.	The Company capitalizes sales commissions and a portion of other incentive compensation costs that are directly related to obtaining customer contracts and that would not have been incurred if the contract had not been obtained. These costs are included in the accompanying consolidated balance sheets and are classified as "Prepaid expenses and other current assets," net of any long-term portion that is included in "Deferred contract costs, net of current portion. Deferred contract costs are amortized to sales and marketing expense over the expected period of benefit, which the Company has determined to be five years based on the estimated customer relationship period	This standard 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. The Company adopted this standard effective January 1, 2020. The adoption did not have a material impact on its consolidated financial statements.
27	**Citrix Systems Inc**	In accordance with the authoritative guidance, the Company capitalizes external direct costs of materials and services and internal costs such as payroll and benefits of those employees directly associated with the development of new functionality in internal use software. These costs are being amortized over the estimated useful life of the software, which is generally three to seven years, and are included in property and equipment in the accompanying consolidated balance sheets.	The Company is required to capitalize certain contract acquisition costs consisting primarily of commissions paid and related payroll taxes when contracts are signed. The asset recognized from capitalized incremental and recoverable acquisition costs is amortized on a basis consistent with the pattern of transfer of the products or services to which the asset relates. The Company's typical contracts include performance obligations related to product and licenses and support. In these contracts, incremental costs of obtaining a contract are allocated to the performance obligations based on the relative estimated standalone selling prices and then recognized on a basis that is consistent with the transfer of the goods or services to which the asset relates. The commissions paid on annual renewals of support for product and licenses are not commensurate with the initial commission. The costs allocated to product and licenses are expensed at the time of sale, when revenue for the product and functional software licenses is recognized. The costs allocated to customer support for product and licenses are amortized ratably over a period of the greater of the contract term or the average customer life, the expected period of benefit of the asset capitalized. The Company currently estimates an average customer life of three years to five years, which it believes is appropriate based on consideration of the historical average customer life and the estimated useful life of the underlying product	Footnotes have no discussion of ASU 2018-15
28	**Cloudera, Inc.**	Capitalization of software development costs for products to be sold to third parties begins upon the establishment of technological feasibility and ceases when the product is available for general release. There is generally no significant passage of time between achievement of technological feasibility and the availability of our software for general release, and the majority of our software is open-source. All software development costs have been charged to research and development expense in the consolidated statements of operations as incurred.	Contract costs, consisting primarily of sales commissions and payroll taxes, that are incremental to obtaining a subscription contract with a customer are capitalized and recorded as deferred costs. We expect to recover deferred contract costs over the period of benefit from the underlying contracts. The amortization period for recovery is consistent with the timing of transfer to the customer of services to which the capitalized costs relate. Contract costs that relate to an underlying transaction are expensed commensurate with the recognition of revenue as performance obligations are satisfied. Contract costs that are incurred in excess of those relating to an underlying transaction are not considered commensurate with recognition of revenue as performance obligations are satisfied, and are amortized on a straight-line basis over the expected benefit period of five years. Commissions for services are treated as a separate class with a contract duration of less than a year and are expensed as incurred. We do not incur direct fulfillment-related costs of a nature required to be capitalized and amortized.	In August 2018, the FASB issued ASU No. 2018-15, Intangibles-Goodwill and Other - Internal-Use Software: Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract (a consensus of the FASB Emerging Issues Task Force) (ASU 2018-15), which aligns the requirements for capitalizing implementation costs in a cloud computing arrangement service contract with the requirements for capitalizing implementation costs incurred for an internal-use software license. The standard is effective for annual reporting periods and interim periods within those years, beginning after December 15, 2019. We will adopt this standard on February 1, 2020 using the prospective adoption approach. We do not anticipate that ASU 2018-15 will have a material impact on our consolidated financial statements.
29	**Cloudflare**	Certain development costs related to the Company's global cloud platform during the application development stage are capitalized. Costs incurred in the preliminary stages of development are analogous to research and development activities and are expensed as incurred. The preliminary stage includes such activities as conceptual formulation of alternatives, evaluation of alternatives, determination of existence of needed technology, and final selection of alternatives. Once the application development stage is reached, internal and external costs are capitalized until the software is substantially complete and ready for its intended use. Capitalized costs are recorded as part of property and equipment, net. Capitalized internal-use software is amortized on a straight-line basis over its estimated useful life, which is generally three years, and is recorded as cost of revenue in the consolidated statements of operations.	The Company capitalizes sales commission and associated payroll taxes paid to internal sales personnel that are incremental to the acquisition of channel partner and direct customer contracts. These costs are recorded as deferred contract acquisition costs on the consolidated balance sheets. The Company determines whether costs should be deferred based on its sales compensation plans, if the commissions are in fact incremental and would not have occurred absent the customer contract. Sales commissions for renewal of a contract are not considered commensurate with the commissions paid for the acquisition of the initial contract. Commissions paid upon the initial acquisition of a contract are amortized over an estimated period of benefit of three years while commissions paid for renewal contracts are amortized over the contractual term of the renewals. Amortization of deferred contract acquisition costs is recognized on a straight-line basis commensurate with the pattern of revenue recognition and included in sales and marketing expense in the consolidated statements of operations. The Company determines the period of benefit for commissions paid for the acquisition of the initial contract by taking into consideration the expected subscription term and expected renewals of its customer contracts, the duration of its relationships with its customers, customer retention data, its technology development lifecycle, and other factors. The Company periodically reviews the carrying amount of deferred contract acquisition costs to determine whether events or changes in circumstances have occurred that could impact the period of benefit of these deferred costs. The Company did not recognize any impairment losses of deferred contract acquisition costs during the periods presented.	In August 2018, the FASB issued ASU No. 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (ASC 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement. This guidance provides that implementation costs be evaluated for capitalization using the same criteria as that used for internal-use software development costs, with amortization expense being recorded in the same income statement expense line as the hosted service costs and over the expected term of the hosting arrangement. For public business entities, it is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after December 15, 2020, and interim periods beginning after December 15, 2021. Early adoption of the amendments in this update is permitted, including adoption in any interim period, for all entities. The Company is currently evaluating the potential impact of this ASU on its consolidated financial statements.
30	**Coupa Software Inc**	The Company capitalizes certain development costs incurred in connection with software development for its cloud-based platform. Costs incurred in the preliminary stages of development are expensed as incurred. Once the software has reached the development stage, internal and external costs, if direct and incurred for adding incremental functionality to the Company's platform, are capitalized until the software is substantially complete and ready for its intended use. Capitalization ceases upon completion of all substantial testing. These software development costs are recorded as part of property and equipment.	Commissions are earned by sales personnel upon the execution of the sales contract by the customer, and commission payments are made shortly after they are earned. Commission costs can be associated specifically with subscription and professional services arrangements. Commissions earned by the Company's sales personnel are considered incremental and recoverable costs of obtaining a contract with a customer. These costs are deferred and then amortized over a period of benefit of five years. The Company determined the period of benefit by taking into consideration its past experience with customers, future cash flows expected from customers, industry peers and other available information.	In August 2018, the FASB issued ASU No. 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 ("ASU 2018-15"). The amendment 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 (and hosting arrangements that include an internal-use software license). The effective date is for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, with early adoption allowed. The Company early adopted the standard effective February 1, 2020, using the prospective approach, and the adoption did not have a material impact on the Company's consolidated financial statements.

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
31	**Crowdstrike**	The Company capitalizes certain development costs incurred in connection with its internal-use software. These capitalized costs are primarily related to the Company's cloud-delivered solution for next-generation endpoint protection. Costs incurred in the preliminary stages of development are expensed as incurred. Once an application has reached the development stage, internal and external costs, if direct, are capitalized until the software is substantially complete and ready for its intended use. Capitalization ceases upon completion of all substantial testing. The Company also capitalizes costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality. Capitalized costs are recorded as property and equipment, net. Maintenance and training costs are expensed as incurred. Internal-use software is amortized to cost of revenue on a straight-line basis over its estimated useful life of three years. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.	The Company capitalizes referral fees paid to partners and sales commission and associated payroll taxes paid to internal sales personnel that are incremental to the acquisition of channel partner and direct customer contracts and would not have occurred absent the customer contract. These costs are recorded as deferred contract acquisition costs on the consolidated balance sheets. Sales commissions for renewal of a contract are not considered commensurate with the commissions paid for the acquisition of the initial contract or follow-on upsell given the substantive difference in commission rates in proportion to their respective contract values. Commissions, including referral fees paid to channel partners, paid upon the initial acquisition of a contract or subsequent upsell are amortized over an estimated period of benefit of four years while commissions paid for renewal contracts are amortized over the contractual term of the renewals. Sales commissions associated with professional service contracts are amortized ratably over an estimated period of benefit of six months and included in sales and marketing expense in the consolidated statements of operations. In determining the period of benefit for commissions paid for the acquisition of the initial contract, the Company took into consideration the expected subscription term and expected renewals of customer contracts, the historical duration of relationships with customers, customer retention data, and the life of the developed technology. The Company periodically reviews the carrying amount of deferred contract acquisition costs to determine whether events or changes in circumstances have occurred that could impact the period of benefit of these deferred costs.	In August 2018, the FASB issued ASU No. 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 (a consensus of the FASB Emerging Issues Task Force). 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. As an emerging growth company defined in the JOBS Act, the Company has elected to delay adoption of this ASU until February 1, 2021. Entities can choose to adopt this ASU prospectively or retrospectively. The Company is currently evaluating the potential impact of this ASU on its consolidated financial statements.
32	**Datadog**	We capitalize certain costs related to the development of our platform and other software applications for internal use. In accordance with authoritative guidance, we begin to capitalize our costs to develop software when preliminary development efforts are successfully completed, management has authorized and committed project funding, and it is probable that the project will be completed and the software will be used as intended. We stop capitalizing these costs when the software is substantially complete and ready for its intended use, including the completion of all significant testing. These costs are amortized on a straight-line basis over the estimated useful life of the related asset, generally estimated to be two years. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditure will result in additional functionality and expense costs incurred for maintenance and minor upgrades and enhancements. Costs incurred prior to meeting these criteria together with costs incurred for training and maintenance are expensed as incurred and recorded within research and development expenses in our consolidated statements of operations. We exercise judgment in determining the point at which various projects may be capitalized, in assessing the ongoing value of the capitalized costs and in determining the estimated useful lives over which the costs are amortized. To the extent that we change the manner in which we develop and test new features and functionalities related to our platform, assess the ongoing value of capitalized assets or determine the estimated useful lives over which the costs are amortized, the amount of internal-use software development costs we capitalize and amortize could change in future periods.	Sales commissions earned by the Company's sales force are considered incremental and recoverable costs of obtaining a contract with a customer. There are no sales commissions earned on renewals. These costs are deferred and then amortized over a period of benefit which is determined to be four years. The Company determined the period of benefit by taking into consideration the length of terms in its customer contracts, life of the technology and other factors. Amounts expected to be recognized within one year of the balance sheet date are recorded as deferred contract costs, current; the remaining portion is recorded as deferred contract costs, non-current, in the consolidated balance sheets. Deferred contract costs are periodically analyzed for impairment. Amortization expense is included in sales and marketing expenses in the accompanying consolidated statements of operations.	In August 2018, the FASB issued ASU No. 2018-15, Intangibles—Goodwill and Other—Internal-Use Software, which align the requirements for capitalizing implementation costs incurred in a hosting arrangeme nt that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by the amendments in this ASU. The amendments in this ASU are effective for public business entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted . The Company does not expect the adoption of this ASU to have a material effect on the Company's consolidated financial statements.
33	**Docusign**	We capitalize qualifying internally-developed software development costs incurred during the application development stage, as long as it is probable the project will be completed, and the software will be used to perform the function intended. Capitalization of such costs ceases once the project is substantially complete and ready for its intended use. Capitalized software development costs are included in "Property and equipment, net" on our consolidated balance sheets and are amortized on a straight-line basis over their expected useful lives of approximately three years.	We capitalize sales commissions, certain parts of the company bonus and associated payroll taxes paid to internal sales personnel that are incremental to the acquisition of customer contracts as deferred contract acquisition costs in "Prepaid expenses and other current assets" and "Deferred contract acquisition costs—noncurrent" on our consolidated balance sheets. We determine whether costs should be deferred based on our sales compensation plans, if the commissions are in fact incremental and would not have occurred absent the customer contract. Commissions paid on professional services contracts are amortized over the period of benefit, being the period the associated revenue is earned as the commissions paid on new and renewal professional services contracts are commensurate with each other.	In August 2018, the FASB issued ASU No. 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40), which 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 (and hosting arrangements that include an internal use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by the amendments in this update. The update is effective for public business entities for interim and annual periods beginning after December 15, 2019. We are evaluating the impact of adoption of ASU 2018-15 on our consolidated financial statements.
34	**Dropbox, Inc.**	The Company capitalizes certain costs related to developed or modified software solely for its internal use and cloud based applications used to deliver its platform. The Company capitalizes costs during the application development stage once the preliminary project stage is complete, management authorizes and commits to funding the project, and it is probable that the project will be completed and that the software will be used to perform the function intended. Costs related to preliminary project activities and post implementation activities are expensed as incurred.	Deferred commissions, net is stated as gross deferred commissions less accumulated amortization. Sales commissions earned by the Company's sales force and third-party resellers, as well as related payroll taxes, are considered to be incremental and recoverable costs of obtaining a contract with a customer. These amounts have been capitalized as deferred commissions within prepaid and other current assets and other assets on the consolidated balance sheets.	In August 2018, the FASB issued ASU No. 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. Under existing U.S. GAAP, there is diversity in practice in accounting for the costs of implementing cloud computing arrangements that are service contracts. The amendments in ASU No. 2018-15 amend the definition of a hosting arrangement and requires a customer in a hosting arrangement that is a service contract to capitalize certain costs as if the arrangement were an internal-use software project. The guidance is effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. The Company does not expect the adoption of ASU No. 2018-15 to have a significant impact on its consolidated financial statements.
35	**Dynatrace, Inc.**	Footnotes have no discussion of capitalization of SW development costs	Deferred sales commissions earned by the Company's sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for new contracts are deferred and then amortized on a straight-line basis over a period of benefit which the Company has estimated to be three years. The period of benefit has been determined by taking into consideration the duration of customer contracts, the life of the technology, renewals of maintenance and other factors. Sales commissions for renewal contracts are deferred and then amortized on a straight-line basis over the related contractual renewal period. Amortization expense is included in sales and marketing expenses on the consolidated statements of operations.	In August 2018, the FASB issued ASU 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract; Disclosures for Implementation Costs Incurred for Internal-Use Software and Cloud Computing Arrangements, which aligns the accounting for implementation costs incurred in a hosting arrangement that is a service contract with the accounting for implementation costs incurred to develop or obtain internal-use software under ASC 350-40, in order to determine which costs to capitalize and recognize as an asset. ASU 2018-15 is effective for annual periods, and interim periods within those years, beginning after December 15, 2020, and can be applied either prospectively to implementation costs incurred after the date of adoption or retrospectively to all arrangements. The Company is currently evaluating the effects the standard will have on its consolidated financial statements.
36	**Egain Corp**	We account for software development costs in accordance with ASC 985, Software, for costs of the software to be sold, leased or marketed, whereby costs for the development of new software products and substantial enhancements to existing software products are included in research and development expense as incurred until technological feasibility has been established, at which time any additional costs are capitalized. Technological feasibility is established upon completion of a working model. To date, software development costs incurred in the period between achieving technological feasibility and general availability of software have not been material and have been charged to operations as incurred.	Under Topic 606, we capitalize incremental costs of obtaining non-cancelable subscription, maintenance and support revenue contracts. The capitalized amounts consist primarily of sales commissions paid to our direct sales force. Capitalized amounts also include (i) amounts paid to employees other than the direct sales force who earn incentive payouts under annual compensation plans that are tied to the value of contracts acquired and (ii) the associated payroll taxes and fringe benefit costs associated with the payments to our employees. Costs capitalized related to new revenue contracts are generally deferred and amortized on a straight-line basis over a period of benefit that we estimate to be five years. We determine the period of benefit by taking into consideration the historical and expected durations of our customer contracts, the expected useful lives of our technologies, and other factors. Commissions for renewal contracts relating to our cloud-based arrangements are generally deferred and then amortized on a straight-line basis over the related contractual renewal period, which is generally five years. Amortization of deferred sales commissions is included as a component of sales and marketing expenses in our consolidated statements of operations.	In August 2018, the Financial Accounting Standards Board (FASB) issued ASU 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40). This update requires a customer in a cloud computing service arrangement to follow the internal-use software guidance to determine which implementation costs to recognize and defer as an asset. This update is effective for fiscal years beginning after December 15, 2019 (our fiscal year 2021). We are currently evaluating the impact of this update on our consolidated financial statements and related disclosures.
37	**Electronic Arts Inc.**	Research and development costs, which consist primarily of software development costs, are expensed as incurred. We are required to capitalize software development costs incurred for computer software to be sold, leased or otherwise marketed after technological feasibility of the software is established or for development costs that have alternative future uses. Under our current practice of developing new games, the technological feasibility of the underlying software is not established until substantially all product development and testing is complete, which generally includes the development of a working model. Software development costs that have been capitalized to date have been insignificant.	For example, ASU 2014-09, Revenue from Contracts with Customers (Topic 606), which is effective for us at the beginning of fiscal 2019, will materially change the way in which we recognize revenue and will require us to change how we report mobile platform fees. For more information on ASU 2014-09 and other accounting standards, see Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 1 - Description of Business and Basis of Presentation under the subheading "Impact of Recently Issued Accounting Standards".	In August 2018, the FASB issued ASU 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40). This update requires a customer in a cloud computing service arrangement to follow the internal-use software guidance in order to determine which implementation costs to defer and recognize as an asset. This update is effective for us beginning in the first quarter of fiscal year 2021. Early adoption is permitted. We are currently evaluating the timing of adoption and impact of this new standard on our Consolidated Financial Statements and related disclosures.
38	**Endurance International Group Holdings, Inc.**	The Company accounts for software development costs for internal use software under the provisions of ASC 350-40, Internal-Use Software. Accordingly, certain costs to develop internal-use computer software are capitalized, provided these costs are expected to be recoverable.	As a result of the implementation of ASC 606, the Company now capitalizes the incremental costs directly related to obtaining and fulfilling a contract (such as sales commissions and certain direct sales and marketing success based costs), if these costs are expected to be recovered. These costs are amortized over the period the services are transferred to the customer, which is estimated based on customer churn rates for various segments of the business. The Company includes only those incremental costs that would not have been incurred if the contracts had not been entered into	In August 2018, the FASB issued ASU No. 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. The new guidance provides for the deferral of implementation costs for cloud computing arrangements and expensing those costs over the term of the cloud services arrangement. The new guidance is effective for fiscal years beginning after December 15, 2019. The Company is currently evaluating the timing of adoption and the expected impact of the new guidance.

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
39	**Everbridge, Inc.**	The Company capitalizes the costs of software developed or obtained for internal use in accordance with FASB ASC 350-40, Internal Use Software. Capitalized software development costs consist of costs incurred during the application development stage and include purchased software licenses, implementation costs, consulting costs, and payroll-related costs for projects that qualify for capitalization. These costs relate to major new functionality. All other costs, primarily related to maintenance and minor software fixes, are expensed as incurred. The Company amortizes the capitalized software development costs on a straight-line basis over the estimated useful life of the software, which is generally three years, beginning when the asset is substantially ready for use. The amortization of capitalized software development costs is reflected in cost of revenue. For software licenses for on premise usage, software development costs are capitalized in accordance with ASC 985-20, Costs of Software to be Sold, Leased or Marketed. The Company capitalizes software development costs incurred after technological feasibility of the software is established or for development costs that have alternative future uses. Under the Company's current practice, the technological feasibility of the underlying software is not established until substantially all product development and testing is complete, which generally includes the development of a working model. Software development costs that have been capitalized to date have not been material.	Sales commissions earned by our sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions attributable to professional services are expensed within twelve months of selling the service to the customer. We determined the period of benefit by taking into consideration our customer contracts, our technology and other factors. Amortization of deferred commissions is included in sales and marketing expenses in the accompanying consolidated statements of operations.	n August 2018, the FASB issued ASU 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract, a new standard on a customer's accounting for implementation, set-up, and other upfront costs incurred in a cloud computing arrangement ("CCA"). Under the new guidance, customers will assess if a CCA includes a software license and if a CCA does include a software license, implementation and set-up costs will be accounted for consistent with existing internal-use software implementation guidance. Implementation costs associated with a CCA that do not include a software license would be expensed to operating expenses. The standard also provides classification guidance on these implementation costs as well as additional quantitative and qualitative disclosures. ASU 2018-15 is effective for the Company beginning in the first quarter of 2020. Entities can choose to adopt the new guidance prospectively or retrospectively. The Company is currently assessing the impact this standard will have on the Company's consolidated financial statements.
40	**Fastly, Inc**	We capitalize certain costs related to the development of our platform and other software applications for internal use. In accordance with authoritative guidance, we begin to capitalize our costs to develop software when preliminary development efforts are successfully completed, management has authorized and committed project funding, and it is probable that the project will be completed and the software will be used as intended. We stop capitalizing these costs when the software is substantially complete and ready for its intended use, including the completion of all significant testing. These costs are amortized on a straight-line basis over the estimated useful life of the related asset, generally estimated to be three years. We also capitalize costs related to specific enhancements when it is probable the expenditure will result in additional functionality and expense costs incurred for maintenance and minor enhancements. Costs incurred prior to meeting these criteria together with costs incurred for training and maintenance are expensed as incurred and recorded within research and development expenses in our consolidated statement of operations. We exercise judgment in determining the point at which various projects may be capitalized, in assessing the ongoing value of the capitalized costs and in determining the estimated useful lives over which the costs are amortized. To the extent that we change the manner in which we develop and test new features and functionalities related to our platform, assess the ongoing value of capitalized assets, or determine the estimated useful lives over which the costs are amortized, the amount of internal-use software development costs we capitalize and amortize could change in future periods.	We capitalize incremental costs associated with obtaining customer contracts, specifically certain commission payments. We pay commissions based on contract value upon signing a new arrangement with a customer and upon renewal and upgrades of existing contracts with customers only if the renewal and upgrades result in an incremental increase in contract value. To the extent that renewals and upgrades do not result in an increase in contract value, no additional commissions are paid. We also incur commission expense on an ongoing basis based upon revenue recognized. In these cases, no incremental costs are deferred, as the commissions are earned and expensed in the same period for which the associated revenue is recognized. Based on the nature of our unique technology and services, and the rate at which we continually enhances and updates our technology, the expected life of the customer arrangement is determined to be approximately five years. Commissions for new arrangements and renewals are both amortized over five years. Amortization is primarily included in sales and marketing expense in the consolidated statements of income. The current portion of deferred commission and incentive payments is included in prepaid expenses and other current assets, and the long-term portion is included in other assets on our Consolidated Balance Sheets.	In August 2018, the FASB issued Accounting Standards Update No. 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (ASC 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement ("ASU 2018-15"). This guidance provides that implementation costs be evaluated for capitalization using the same criteria as that used for internal-use software development costs, with amortization expense being recorded in the same income statement expense line as the hosted service costs and over the expected term of the hosting arrangement. The guidance is effective for financial statements issued for fiscal years beginning after December 15, 2020, and interim periods within annual periods beginning after December 15, 2021, using the prospective method. Early adoption is permitted, including adoption in any interim period. We are currently evaluating the potential impact of this guidance on our consolidated financial statements and related disclosures.
41	**Globalscape Inc**	When we complete research and development for a software product and have in place a program plan and a detail program design or a working model of that software product, we capitalize production costs incurred for that software product from that point forward until it is ready for general release to the public. Thereafter, we amortize capitalized software production costs to expense using the straight-line method over the estimated useful life of that product, which is generally three years. We periodically assess the carrying value of capitalized software development costs and our method of amortizing them relative to our estimates of realizability through sales of products in the marketplace.	Footnotes have no discussion of capitalization of commissions	Footnotes have no discussion of ASU 2018-15
42	**Guidewire Software, Inc.**	Certain on-premise software development costs incurred subsequent to the establishment of technological feasibility are subject to capitalization and amortized over the estimated lives of the related products. Technological feasibility is established upon completion of a working model. Costs incurred subsequent to the establishment of technological feasibility have not been material and, therefore, all software development costs related to on-premise software have been charged to research and development expense in the accompanying consolidated statements of operations as incurred. For qualifying costs incurred for computer software developed for internal use, the Company begins to capitalize costs when preliminary development efforts are successfully completed, management has authorized and committed project funding, and it is probable that the project will be completed. If any of these criteria cease being met before the software reaches its intended use, any capitalized costs related to the project will be impaired. When the software reaches its intended use, capitalized costs are amortized to expenses over the estimated useful lives of the related assets, generally estimated to be three to five years. Costs incurred prior to meeting these capitalization criteria and costs incurred for training and maintenance are expensed as incurred and recorded in research and development expense on the Company's consolidated statements of operations. Capitalized software development costs are recorded in property and equipment on the Company's consolidated balance sheets.	Contract costs consist of customer acquisition costs and costs to fulfill a contract, which includes commissions and their related payroll taxes, royalties, and referral fees. Contract costs are classified as either current or non-current based on the duration of time remaining between the date of the consolidated balance sheets and the anticipated amortization date of the associated costs.	In August 2018, the FASB issued ASU No. 2018-15, Intangibles, Goodwill and Other (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract ("ASU 2018-15"), which requires implementation costs incurred by customers in cloud computing arrangements to be deferred and recognized over the term of the arrangement, if those costs would be capitalized by the customer in a software licensing arrangement under the internal-use software guidance in ASC 350-40. ASU 2018-15 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019, with early adoption permitted. The Company will evaluate the impact of adopting the new standard for its 2021 fiscal year and subsequent period
43	**Hubspot Inc**	Certain payroll and stock compensation costs incurred to develop functionality for the Company's software and internally built software platforms, as well as certain upgrades and enhancements that are expected to result in enhanced functionality are capitalized. The costs incurred in the preliminary stages of development are expensed as incurred. Once an application has reached the development stage, the Company capitalizes certain software development costs for new offerings as well as upgrades to existing software platforms. Capitalized software development costs are amortized on a straight-line basis over their estimated useful life of two to five years. Management evaluates the useful lives of these assets on a quarterly basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. The Company determines the amount of internal software costs to be capitalized based on the amount of time spent by the developers on projects in the application stage of development. There is judgment involved in estimating time allocated to a particular project in the application stage. Costs associated with building or significantly enhancing the Growth Platform and internally built software platforms are capitalized, while costs associated with planning new developments and maintaining the Growth Platform software and internally built software platforms are expensed as incurred.	Sales commissions earned by our sales force are considered incremental, recoverable costs of obtaining a contract with a customer. Sales commissions for initial contracts are deferred and then amortized on a straight-line basis over a period of benefit that we have determined to be approximately one to three years. The one to three-year period has been determined by taking into consideration the type of product sold, the commitment term of the customer contract, the nature of the Company's technology development life-cycle, and an estimated customer relationship period. Sales commissions for upgrade contracts are deferred and amortized on a straight-line basis over the remaining estimated customer relationship period of the related customer. While we do not anticipate any significant changes to the one to three year amortization period, if a change did occur it could produce a material impact on our financial statements. For example, if the commitment term of our customer contracts significantly increased, our deferred commission expense asset would increase, and our amortization expense would decrease in the period in which the change occurs.	Footnotes have no discussion of ASU 2018-15
44	**Inspired Entertainment, Inc.**	We classify software development costs as either internal use software or external use software. We account for costs incurred to develop internal use software in accordance with Accounting Standards Codification ("ASC") ASC 350-40, Internal Use Software. Consequently, any costs incurred during preliminary project stages are expensed; direct costs incurred during the application development stages are capitalized; and costs incurred during the post-implementation/operation stages are expensed. Once the software is placed in operation, we amortize the capitalized internal use software cost over its estimated economic useful life, which range from two to five years.	Footnotes have no discussion of capitalization of commissions	Footnotes have no discussion of ASU 2018-15
45	**Instructure Inc**	Research and Development. Research and development expenses consist primarily of personnel costs of our development team, including payroll, benefits and stock-based compensation expense and allocated overhead costs. We capitalize certain software development costs that are attributable to developing new applications, features and adding incremental functionality to our platform. We amortize these costs to subscription and support cost of revenue in the consolidated statements of operations over the estimated life of the new application or incremental functionality, which is generally three years.	Sales commissions earned by our sales force, as well as related payroll taxes, are considered incremental and recoverable costs of obtaining a contract with a customer. These costs are deferred and then amortized on a straight-line basis over a period of benefit that we have determined to be generally four years. We determined the period of benefit by taking into consideration our customer contracts, our technology and other factors. Amortization of deferred commissions is included in sales and marketing expenses in the accompanying consolidated statements of operations.	Effective January 1, 2019, the Company early adopted ASU 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract ("ASU 2018-15") using a prospective approach. This guidance aligns the accounting for implementation costs related to a hosting arrangement that is a service contract with the guidance on capitalizing costs associated with developing or obtaining internal-use software. The adoption of this guidance did not have a material impact on our consolidated financial statements and related notes.
46	**Intellicheck, Inc.**	Footnotes have no discussion of capitalization of SW development costs	Footnotes have no discussion of capitalization of commissions	In August 2018, the FASB issued ASU No. 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (ASC 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract ("ASU 2018-15"). The standard requires hosting arrangements that are service contracts to follow the guidance for internal-use software to determine which implementation costs can be capitalized. This standard is effective for fiscal years beginning after December 15, 2019 with early adoption permitted and can be applied retrospectively or prospectively. The Company determined has this standard will not have a material impact on its financial statements.
47	**Intelligent Systems Corp**	Research and development costs are expensed in the period in which they are incurred. Contract specific software development costs are capitalized and recognized when the related contract revenue is recognized.	Footnotes have no discussion of capitalization of commissions	Footnotes have no discussion of ASU 2018-15
48	**Intuit Inc**	We capitalize costs related to development of hosted services that we provide to our customers and internal use of enterprise-level business and finance software in support of our operational needs. Costs incurred in the application development phase are capitalized and amortized on a straight-line basis over their useful lives, which are generally three to six years. Costs related to planning and other preliminary project activities and to post-implementation activities are expensed as incurred. We test these assets for impairment whenever events or changes in circumstances occur that could impact their recoverability.	Our internal sales commissions are considered incremental costs of obtaining the contract with a customer. Internal sales commissions for subscription offerings where we expect the benefit of those costs to continue longer than one year are capitalized and amortized ratably over the period of benefit, which ranges from three to four years. Total capitalized costs to obtain a contract are not significant and are included in prepaid expenses and other current assets and other assets on our consolidated balance sheets.	In August 2018 the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-15, "Intangibles—Goodwill and Other (Topic 350): Internal-Use Software." This standard aligns the requirements for capitalizing implementation costs incurred in a cloud computing arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The standard is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, which means that it will be effective for us in the first quarter of our fiscal year beginning August 1, 2020. Early adoption is permitted. We are currently evaluating the impact of our pending adoption of ASU 2018-15 on our consolidated financial statements.

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
49	**Logmein, Inc.**	The Company capitalizes certain direct costs to develop functionality as well as certain upgrades and enhancements of its on-demand products that are probable to result in additional functionality. The costs incurred in the preliminary stages of development are expensed as incurred. Once an application has reached the development stage, internal and external costs, if direct and incremental, are capitalized as part of intangible assets until the software is substantially complete and ready for its intended use. Internally developed software costs that are capitalized are classified as intangible assets and amortized over a period of two to three years.	The Company's incremental costs of obtaining a contract consist of sales commissions and the related fringe benefits. Sales commissions and fringe benefits paid on renewals are not commensurate with sales commissions paid on the initial contract. Sales commissions and fringe benefits are deferred and amortized on a straight-line basis over the period of benefit, which the Company has estimated to be three to four years, for initial contracts and amortized over the renewal period for renewal contracts, typically one year. The period of benefit was determined based on an average customer contract term, expected contract renewals, changes in technology and the Company's ability to retain customers. Deferred commissions are classified as current or noncurrent assets based on the timing the expense will be recognized. The current and noncurrent portions of deferred commissions are included in prepaid expenses and other current assets and other assets, respectively, in the Company's consolidated balance sheets.	In August 2018, the Financial Accounting Standards Board, or FASB, issued ASU 2018-15, Intangibles – Goodwill and Other – Internal-Use Software: Customers Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract, referred to herein as ASU 2018-15. The amendments in ASU 2018-15 align 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 (and hosting arrangements that include an internal-use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by these amendments. The provisions may be adopted prospectively or retrospectively. ASU 2018-15 is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2019. Early adoption is permitted. The Company early adopted ASU 2018-15 on a prospective basis effective July 1, 2019. The adoption of this guidance did not have a significant effect on the Company's condensed consolidated financial statements.
50	**Mam Software Group, Inc.**	Costs incurred to develop computer software products to be sold or otherwise marketed are charged to expense until technological feasibility of the product has been established. Once technological feasibility has been established, computer software development costs (consisting primarily of internal labor costs) are capitalized and reported at the lower of amortized cost or estimated realizable value. Purchased software development cost is capitalized and recorded at its estimated fair market value. When a product is ready for general release, its capitalized costs are amortized on a product-by-product basis. The annual amortization is the greater of: the ratio that current gross revenues for a product bear to the total of current and anticipated future gross revenues for that product, and the straight-line method over the remaining estimated economic life (a period of three to ten years) of the product including the period being reported on. If the future market viability of a software product is less than anticipated, impairment of the related unamortized development costs could occur, which could significantly impact our results of operations.	The Company's incremental direct costs of obtaining a contract consist of sales commissions which are amortized ratably over the term of economic benefit which the Company has determined to be the life of the contract for subscription customers. These deferred costs are classified as current or non-current based on the timing of when the Company expects to recognize the expense. Incremental costs related to initial support and renewals are expensed as incurred because the term of economic benefit is one year or less. The current and non-current portions of deferred commissions are included in prepaid expenses and other current assets and other long-term assets, respectively, in the Company's condensed consolidated balance sheets.	Footnotes have no discussion of ASU 2018-15
51	**Manhattan Associates Inc**	Research and development expenses are charged to expense as incurred. We determine the amount of development costs capitalizable under the provisions of FASB Codification accounting for costs of computer software to be sold, leased, or marketed. Under this guidance, computer software development costs are charged to R&D expense until technological feasibility is established, after which remaining software production costs are capitalized. We have defined technological feasibility as the point in time at which we have a detailed program design or a working model of the related product, depending on the type of development efforts, and high-risk development issues have been resolved through end-to-end system testing.	We consider sales commissions to be incremental costs of obtaining a contract with a customer. We defer and recognize an asset for sales commissions related to performance obligations with an expected period of benefit of more than one year. We apply the practical expedient to expense sales commissions when the amortization period would have been one year or less.	Footnotes have no discussion of ASU 2018-15
52	**Medallia, Inc.**	Software development costs include costs to develop software to be used to meet internal needs and applications used to deliver our services. The Company capitalizes development costs related to these software applications once the preliminary project stage is complete and it is probable that the project will be completed and the software will be used to perform the function intended.Costs related to preliminary project activities, including training and maintenance are expensed as incurred and recorded to research and development expenses.	Sales commissions earned by the sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for initial contracts are deferred and then amortized on a straight-line basis over a period of benefit that the Company has determined to be five years. The Company determined the period of benefit by taking into consideration its customer contracts, technology and other factors. Sales commissions for renewal contracts (which are not considered commensurate with sales commissions for new revenue contracts) are deferred and amortized on a straight-line basis over the related contractual renewal period. Amortization expense is included in sales and marketing expenses in the consolidated statements of operations.	Footnotes have no discussion of ASU 2018-15
53	**Microsoft Corp**	Research and development expenses include payroll, employee benefits, stock-based compensation expense, and other headcount-related expenses associated with product development. Research and development expenses also include third-party development and programming costs, localization costs incurred to translate software for international markets, and the amortization of purchased software code and services content. Such costs related to software development are included in research and development expense until the point that technological feasibility is reached, which for our software products, is generally shortly before the products are released to production. Once technological feasibility is reached, such costs are capitalized and amortized to cost of revenue over the estimated lives of the products.	Assets Recognized from Costs to Obtain a Contract with a Customer We recognize an asset for the incremental costs of obtaining a contract with a customer if we expect the benefit of those costs to be longer than one year. We have determined that certain sales incentive programs meet the requirements to be capitalized. Total capitalized costs to obtain a contract were immaterial during the periods presented and are included in other current and long-term assets in our consolidated balance sheets.	Footnotes have no discussion of ASU 2018-15
54	**Microstrategy Inc**	Due to the pace of the Company's software development efforts and frequency of its software releases, the Company's software development costs are expensed as incurred within "Research and development" in the Consolidated Statements of Operations. In previous periods, software development costs were expensed as incurred until technological feasibility had been established, at which time such costs were capitalized until the software was available for general release to customers. Capitalized software development costs include direct labor costs and fringe benefit costs attributed to programmers, software engineers, and quality control and field certifiers working on the software after it reaches technological feasibility, but before it is generally available to customers for sale. Technological feasibility is considered to be achieved when a software design and working model of the software have been completed. Capitalized software development costs are typically amortized on a straight-line basis over the estimated software life of three years. The amortization expense is recorded within cost of product licenses revenues in the Consolidated Statements of Operations.	Incremental costs incurred to obtain contracts with customers include certain variable compensation (e.g., commissions and bonuses) paid to the Company's sales team. Although the Company may bundle its goods and services into one contract, commissions are individually determined on each distinct good or service in the contract. The Company expenses as incurred those amounts earned on consulting and education services, which are generally performed within a one-year period and primarily sold on a standalone basis. The Company also expenses as incurred those amounts earned on product license sales, since the amount is earned when the license is delivered. The Company capitalizes those amounts earned on product support and initial-year cloud subscriptions and amortizes the costs over a period of time that is consistent with the pattern of transfer to the customer, which the Company has determined to be a period of three years. Although the Company typically sells product support and cloud subscriptions for a period of one year, a majority of customers renew their product support and cloud subscription arrangements. Three years is generally the period after which platforms are no longer supported by the Company's support team and when customers generally choose to upgrade their software platform. Although the Company pays variable compensation on cloud subscription renewals, commissions paid on cloud subscription renewals are not considered commensurate with the initial contract year. The Company expenses as incurred those amounts earned on all cloud subscription renewals as the renewal periods are generally for one year and the variable compensation on these renewals are commensurate with each other. The Company does not pay variable compensation on product support renewals.	In August 2018, the FASB issued Accounting Standards Update No. 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 ("ASU 2018-15"). ASU 2018-15 requires customers in a hosting arrangement that is a service contract to follow existing internal-use software guidance to determine which implementation costs to capitalize and which costs to expense. Under this model, customers would need to determine the nature of the implementation costs and the project stage in which they are incurred to determine which costs to capitalize or expense. Customers would be required to amortize the capitalized implementation costs over the term of the hosting arrangement, which might extend beyond the noncancelable period if there are options to extend or terminate. Financial statement presentation under ASU 2018-15 requires: (i) capitalized implementation costs be classified in the same Balance Sheet line item as the amounts prepaid for the related hosting arrangement; (ii) amortization of capitalized implementation costs be presented in the same income statement line item as the service fees for the related hosting arrangement; and (iii) cash flows related to capitalized implementation costs be presented within the same category of cash flow activity as the cash flows for the related hosting arrangement (i.e. operating activity). ASU 2018-15 also requires disclosures for material capitalized implementation costs, including the nature of the hosting arrangement and additional disclosures similar to those required for major classes of depreciable assets. The Company will apply this guidance prospectively to eligible costs incurred on or after January 1, 2020 and is in the process of implementing processes and internal controls to properly identify cloud computing arrangements within the scope of ASU 2018-15, track and approve capitalizable implementation costs, and determine appropriate amortization methods and periods. The adoption of ASU 2018-15 will not result in the adjustment of any prior period Consolidated Financial Statements, nor will it result in any adjustment to the 2020 opening retained earnings balance.
55	**Mobileiron, Inc.**	We capitalize costs incurred during the application development stage related to our internally used software. Such costs are primarily incurred by third-party vendors and consultants. Costs related to preliminary project activities and post-implementation activities are expensed as incurred. Amounts capitalized in all periods presented were not significant. All software development costs incurred in connection with our cloud offering, or SaaS, are also sold or marketed to partners or end customers, therefore we start capitalizing costs when technological feasibility is achieved. No costs were capitalized in any periods presented as we believe that our current process for developing software is essentially completed concurrent with the establishment of technological feasibility.	We recognize an asset for the incremental costs of obtaining a contract with a customer. We have determined that certain sales incentive programs meet the requirements to be capitalized and we include those costs in current and non-current deferred commissions on our consolidated balance sheets. Deferred commissions are amortized over the period commensurate with revenue recognition.	In August 2018, the FASB issued ASU 2018-15 "Intangibles—Goodwill and Other—Internal-Use Software." The amendments in this Update align 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 and require the entity (customer) to expense the capitalized implementation costs of a hosting arrangement that is a service contract over the term of the hosting arrangement. The standard is effective for public business entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. We do not expect the adoption of this ASU to have a material impact on our consolidated financial position, results of operations, or cash flows.
56	**Mongodb, Inc.**	Software development costs for software to be sold, leased, or otherwise marketed are expensed as incurred until the establishment of technological feasibility, at which time those costs are capitalized until the product is available for general release to customers and amortized over the estimated life of the product. Technological feasibility is established upon the completion of a working prototype that has been certified as having no critical bugs and is a release candidate. To date, costs and time incurred between the establishment of technological feasibility and product release have not been material, resulting in software development costs qualifying for capitalization being immaterial. As a result, the Company has not capitalized any related software development costs in any of the periods presented. Costs related to software acquired, developed, or modified solely to meet the Company's internal requirements, with no substantive plans to market such software at the time of development, or costs related to the development of web-based product are capitalized during the application development stage. Costs incurred during the preliminary planning and evaluation stage of the project and during post implementation operational stage are expensed as incurred.	The Company capitalizes its incremental costs of obtaining non-cancelable subscription contracts with customers, which generally consist of sales commissions paid to the Company's sales force and related payroll taxes. These costs are recorded on the Company's consolidated balance sheet as deferred commissions. Amortization is recognized based on the expected future revenue streams under the customer contracts over a period of benefit that the Company has determined to be five years. The Company determined the period of benefit by taking into consideration its customer contracts, its technology and other factors. Sales commissions and related payroll taxes for renewal contracts are deferred and then amortized based on the pattern of the associated revenue recognition over the related contractual renewal period. Sales commissions are generally paid up front and one month in arrears, however, the timing of payment is based on contractual terms of the underlying subscription contract and is subject to an evaluation of customer credit-worthiness. The deferred commission amounts are recoverable through the future revenue streams under the non-cancelable customer contracts. Amortization of deferred commissions is included in sales and marketing expense in the consolidated statements of operations. The Company adopted the practical expedient that permits an entity to expense the costs to obtain a contract as incurred when the expected amortization period is one year or less.	Cloud Computing. In August 2018, the FASB issued ASU 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract, which aligns the accounting for implementation costs incurred in a hosting arrangement that is a service contract with the accounting for implementation costs incurred to develop or obtain internal-use software under ASC 350-40, in order to determine which costs to capitalize and recognize as an asset and which costs to expense. ASU 2018-15 becomes effective for the Company for the fiscal year beginning February 1, 2020. The Company expects to apply ASU 2018-15 prospectively for implementation costs incurred after the date of adoption and does not expect ASU 2018-15 to have a material impact on its consolidated financial statements upon adoption.
57	**Mtbc, Inc.**	The Company capitalizes certain development costs incurred in connection with its internal-use software. Costs incurred in the preliminary stages of development are expensed as incurred. Once an application has reached the development stage, internal and external costs, if direct, are capitalized until the software is substantially complete and ready for its intended use. Capitalization ceases upon completion of all substantial testing. The Company also capitalizes costs related to specific upgrades and enhancements when it is probable that the expenditures will result in additional functionality. Capitalized costs are recorded as part of intangible assets. Maintenance and training costs are expensed as incurred. Internal use software is amortized on a straight line basis over its estimated useful life, generally three years. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.	Our sales incentive plans include commissions payable to employees and third parties at the time of initial contract execution that are capitalized as incremental costs to obtain a contract. The capitalized commissions are amortized over the period the related services are transferred. As we do not offer commissions on contract renewals, we have determined the amortization period to be the estimated client life, which is three years.	Footnotes have no discussion of ASU 2018-15
58	**National Instruments Corp**	We capitalize costs related to the development and acquisition of certain software products. Capitalization of costs begins when technological feasibility has been established and ends when the product is available for general release to customers. Technological feasibility for our products is established when the product is available for beta release. Judgment is required in determining when technological feasibility of a product is established. Amortization is computed on an individual product basis for those products available for market and has been recognized based on the product's estimated economic life, generally three years. At each balance sheet date, the unamortized costs are reviewed by management and reduced to net realized value when necessary.	Footnotes have no discussion of capitalization of commissions	Footnotes have no discussion of ASU 2018-15

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
59	**Netsol Technologies Inc**	Costs incurred to internally develop computer software products or to enhance an existing product are recorded as research and development costs and expensed when incurred until technological feasibility for the respective product is established. Thereafter, all software development costs are capitalized and reported at the lower of unamortized cost or net realizable value. Capitalization ceases when the product or enhancement is available for general release to customers. The Company makes on-going evaluations of the recoverability of its capitalized software projects by comparing the amount capitalized for each product to the estimated present value of expected future net income from the product. If such evaluations indicate that the unamortized software development costs exceed the present value of expected future net income, the Company writes off the amount which the unamortized software development costs exceed such present value. Capitalized and purchased computer software development costs are being amortized ratably based on the projected revenue associated with the related software or on a straight-line basis.	Footnotes have no discussion of capitalization of commissions	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.” The amendments in this update align 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 (and hosting arrangements that include an internal-use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by the amendments in this update. The amendments in this update are effective for the Company on July 1, 2020, with early adoption permitted. The amendments in this update should be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. The Company is in the process of assessing the impact of the amendments in this update but does not expect it to have a material impact on the Company’s consolidated financial statements.
60	**Nuance Communications, Inc.**	We expense software development costs, including costs to develop software products or the software component of products to be sold, leased, or marketed to external users, before technological feasibility is reached. Technological feasibility is typically reached shortly before the release of such products and as a result, development costs that meet the criteria for capitalization were not material for the periods presented. Software development costs also include costs to develop software to be used solely to meet internal needs and cloud based applications used to deliver our services. We capitalize development costs related to these software applications once the preliminary project stage is complete and it is probable that the project will be completed and the software will be used to perform the function intended.	Following our adoption of ASC 606, we are required to capitalize certain contract acquisition costs. The capitalized costs primarily relate to paid commissions and other direct, incremental costs to acquire customer contracts. In accordance with the practical expedient in ASC 606-10-10-4, we apply a portfolio approach to estimate contract acquisition costs for groups of customer contracts. We elect to apply the practical expedient in ASC 340-40-25-4 and will expense contract acquisition costs as incurred where the expected period of benefit is one year or less. Sales commissions paid on renewal maintenance and support are not commensurate with sales commissions paid on the initial maintenance and support contract. Contract acquisition costs are deferred and amortized on a straight-line basis over the period of benefit, which we have estimated to be between one and five years. The period of benefit was determined based on an average customer contract term, expected contract renewals, changes in technology and our ability to retain customers including canceled contracts. Contract acquisition costs are classified as current or noncurrent assets based on when the expense will be recognized. The current and noncurrent portions of contract acquisition costs are included in Prepaid expenses and other current assets, and Other assets, respectively.	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", which is effective for fiscal year beginning after December 15, 2019, and interim periods within those fiscal years, with early adoption permitted. The guidance requires that implementation costs related to a hosting arrangement that is a service contract be capitalized and amortized over the term of the hosting arrangement, starting when the module or component of the hosting arrangement is ready for its intended use. The guidance will be applied retrospectively to each period presented. We do not expect the implementation to have a material impact on our consolidated financial statements.
61	**Nutanix, Inc.**	Footnotes have no discussion of capitalization of SW development costs	We capitalize commissions paid to sales personnel and the related payroll taxes when customer contracts are signed. These costs are recorded as deferred commissions in the consolidated balance sheets, current and non-current. We determine whether costs should be deferred based on our sales compensation plans, if the commissions are incremental and would not have been incurred absent the execution of the customer contract. Commissions paid upon the initial acquisition of a contract are amortized over the estimated period of benefit, which may exceed the term of the initial contract if the commissions expected to be paid upon renewal are not commensurate with that of the original contract. Accordingly, the amortization of deferred costs is recognized on a systematic basis that is consistent with the pattern of revenue recognition allocated to each performance obligation and included in sales and marketing expense in the consolidated statements of operations. We determine the estimated period of benefit by evaluating the expected renewals of customer contracts, the duration of relationships with our customers, customer retention data, our technology development lifecycle and other factors. Deferred costs are periodically reviewed for impairment.	In August 2018, the FASB issued ASU 2018-15, Intangibles-Goodwill and Other (Topic 350): Internal-Use Software, which aligns the requirements for capitalizing implementation costs incurred in a cloud computing arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The new standard is effective for fiscal years beginning after December 15, 2019, with early adoption permitted, including interim reporting periods within those fiscal years. We early adopted the standard effective August 1, 2018, using the prospective approach, and our adoption did not have a material impact on our consolidated financial statements.
62	**Okta, Inc.**	Footnotes have no discussion of capitalization of SW development costs	Sales commissions earned by the Company’s sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for new revenue contracts, including incremental sales to existing customers, are deferred and then amortized on a straight-line basis over a period of benefit, which the Company has determined to be generally five years. The Company determined the period of benefit by taking into consideration its customer contracts, its technology and other factors. Sales commissions for renewal contracts (which are not considered commensurate with sales commissions for new revenue contracts and incremental sales to existing customers) are deferred and then amortized on a straight-line basis over the related period of benefit, which is generally the related contract renewal term. Amortization expense is included in sales and marketing expenses in the accompanying consolidated statements of operations.	In August 2018, the FASB issued ASU 2018-15, Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract (ASU 2018-15), which requires a customer in a cloud computing arrangement that is a service contract to follow the internal-use software guidance in Accounting Standards Codification 350-40 to determine which implementation costs to defer and recognize as an asset. This guidance is effective for the Company on February 1, 2020 with early adoption permitted. The Company is currently evaluating the impact of the adoption of this standard on its consolidated financial statements and related disclosures and does not expect a material impact.
63	**Oracle Corp**	All research and development costs are expensed as incurred in accordance with ASC 730, Research and Development. Software development costs required to be capitalized under ASC 985-20, Costs of Software to be Sold, Leased or Marketed, and under ASC 350-40, Internal-Use Software, were not material to our consolidated financial statements in fiscal 2019, 2018 and 2017.	We defer sales commissions earned by our sales force that are considered to be incremental and recoverable costs of obtaining a cloud, license support and hardware support contract. Initial sales commissions for the majority of these aforementioned contracts are generally deferred and amortized on a straight-line basis over a period of benefit that we estimate to be four to five years. We determine the period of benefit by taking into consideration the historical and expected durations of our customer contracts, the expected useful lives of our technologies, and other factors. Sales commissions for renewal contracts relating to our cloud-based arrangements are generally deferred and then amortized on a straight-line basis over the related contractual renewal period, which is generally one to three years. Amortization of deferred sales commissions is included as a component of sales and marketing expenses in our consolidated statements of operations.	In addition, in fiscal 2019, we also adopted the following Accounting Standards Updates, none of which had a material impact upon adoption or for any of the periods presented to our reported financial position, results of operations or cash flows: 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 (ASU 2018-15);
64	**Pagerduty, Inc.**	The Company evaluates costs related to the development of its platform and certain projects for internal use incurred during the application development stage. Costs related to preliminary project activities and post-implementation activities are expensed as incurred and costs related to the application development stage are capitalized. Internal-use software is amortized on a straight-line basis over its estimated useful life of three years. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.	Deferred contract costs consist of sales commissions earned by the Company’s sales force which are considered incremental and recoverable costs of obtaining a contract with a customer. The Company determined that sales commissions that are related to contract renewals are not commensurate with commissions earned on the initial contract. Accordingly, sales commissions for initial contracts are deferred and then amortized on a straight-line basis over a period of benefit that the Company has determined to be four years. The Company determined the period of benefit by taking into consideration its customer contracts, technology, and other factors. Amounts anticipated to be recognized within one year of the balance sheet date are recorded as deferred contract costs, current; the remaining portion is recorded as deferred contract costs, noncurrent in the consolidated balance sheets. Deferred contract costs are periodically reviewed for impairment. Amortization of deferred contract costs is included in sales and marketing expense in the consolidated statements of operations.	Footnotes have no discussion of ASU 2018-15
65	**Paycom Software, Inc.**	Capitalized costs include external direct costs of materials and services associated with developing or obtaining internal use computer software and certain payroll and payroll-related costs for employees who are directly associated with internal use computer software projects. The amount of payroll costs that are capitalized with respect to these employees is limited to the time directly spent on such projects. Expenditures for software purchases and software developed or obtained for internal use are capitalized and amortized over a three-year period on a straight-line basis. Costs associated with preliminary project stage activities, training, maintenance and all other post-implementation stage activities are expensed as incurred. We also expense internal costs related to minor upgrades and enhancements, as it is impractical to separate these costs from normal maintenance activities.	Footnotes have no discussion of capitalization of commissions	In August 2018, the Financial Accounting Standards Board (“FASB”) issued ASU No. 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 (a consensus of the FASB Emerging Issues Task Force)” (“ASU 2018-15”). ASU 2018-15 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 (and hosting arrangements that include an internal-use software license). This guidance is effective for fiscal years beginning after December 15, 2019, and for interim periods within those fiscal years, with early adoption permitted. The adoption of this guidance will not have a material impact on the consolidated financial statements.
66	**Paylocity Holding Corp**	We apply ASC 350-40, Intangibles—Goodwill and Other—Internal-Use Software, to the accounting for costs of internal-use software. Software development costs are capitalized when module development begins, it is probable that the project will be completed, and the software will be used as intended. Costs associated with preliminary project stage activities, training, maintenance and all other post implementation stage activities are expensed as incurred. We also capitalize certain costs related to specific upgrades and enhancements when it is probable the expenditures will result in significant additional functionality. The capitalization policy provides for the capitalization of certain payroll costs for employees who are directly associated with developing internal-use software as well as certain external direct costs. Capitalized employee costs are limited to the time directly spent on such projects.	The Company defers certain selling and commission costs that meet the capitalization criteria under ASC 340-40, which were expensed as incurred prior to the adoption of Topic 606. The Company also capitalizes certain costs to fulfill a contract related to its proprietary products if they are identifiable, generate or enhance resources used to satisfy future performance obligations and are expected to be recovered under ASC 340-40. As discussed in Note 2(s), the Company determined that implementation services related to its proprietary products are not separate performance obligations for contracts entered into after July 1, 2018. Implementation fees are treated as nonrefundable upfront fees and the related implementation costs are required to be capitalized and amortized over the expected period of benefit, which is the period in which the Company expects to recover the costs and enhance its ability to satisfy future performance obligations.	Footnotes have no discussion of ASU 2018-15
67	**Ping Identity Holding Corp.**	Costs for the development of new software products sold to customers and substantial enhancements to existing software products sold to customers are expensed as incurred until technological feasibility has been established, at which time any additional costs are capitalized during the development stage and until the software is generally released. The Company believes its current process for developing software will be essentially completed concurrently with the establishment of technological feasibility; hence, no costs have been capitalized to date. For development costs related to software to be used internally, the Company follows guidance of Accounting Standards Codification Topic 350-40, Internal Use Software (“ASC 350-40”). ASC 350-40 set forth the guidance for costs incurred for computer software developed or obtained for internal use and requires companies to capitalize qualifying computer software costs that are incurred during the application development stage. These capitalized costs are included in intangible assets in the consolidated balance sheets and are amortized on a straight-line basis over the expected useful life of the software, which is estimated to be between three and four years. Costs related to preliminary project activities and post-implementation activities are expensed as incurred. For the years ended December 31, 2019, 2018 and 2017, the Company capitalized $10.5 million, $6.3 million and $3.4 million, respectively, related to internal-use software costs. The Company capitalizes the cost of software purchased from third-party vendors and has classified such costs as property and equipment in the consolidated balance sheets. These costs are amortized over their useful lives, which are primarily estimated to be three years.	Sales commissions earned by the Company’s internal and external sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for new contracts and additional sales to existing customers are deferred and recorded in deferred commissions, current and noncurrent in the Company’s consolidated balance sheets. Deferred commissions are amortized over the period of benefit, which the Company has determined to be generally four years. The Company determined the period of benefit by taking into consideration its customer contracts, its technology and other factors. Deferred commissions are amortized consistent with the pattern of revenue recognition for each performance obligation for contracts for which the commissions were earned. The Company includes amortization of deferred commissions in sales and marketing expense in the consolidated statements of operations. The Company periodically reviews the carrying amount of deferred commissions to determine whether events or changes in circumstances have occurred that could impact the period of benefit of these deferred costs.	n August 2018, the FASB issued ASU No. 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 (“ASU 2018-15”), which requires implementation costs incurred by customers in a cloud computing arrangement to be deferred over the noncancelable term of the cloud computing arrangement plus any optional renewal periods that (1) are reasonably certain to be exercised by the customer, or (2) for which exercise of the renewal option is controlled by the cloud service provider. The effective date of this pronouncement is for fiscal years beginning after December 15, 2020 and interim periods within annual periods beginning after December 15, 2021, though early adoption is permitted. The Company is currently evaluating the impact of this pronouncement on its consolidated financial statements.
68	**Progress Software Corp /Ma**	Software development costs associated with internal use software are incurred in three stages of development: the preliminary project stage, the application development stage, and the post-implementation stage. Costs incurred during the preliminary project and post-implementation stages are expensed as incurred. Certain internal and external qualifying costs incurred during the application development stage are capitalized as property and equipment. Internal use software is amortized on a straight-line basis over its estimated useful life of three years, beginning when the software is ready for its intended use.	Footnotes have no discussion of capitalization of commissions	In August 2018, the FASB issued Accounting Standards Update No. 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 ("ASU 2018-15"). ASU 2018-15 amends current guidance to align the accounting for costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing costs associated with developing or obtaining internal-use software. Capitalized implementation costs must be expensed over the term of the hosting arrangement and presented in the same line item in the statement of income as the fees associated with the hosting element (service) of the arrangement. The guidance in ASU 2018-15 is effective for annual reporting periods beginning after December 15, 2019, with early adoption permitted. We are currently accounting for costs incurred in a cloud computing arrangement in accordance with the guidance provided in ASU 2018-15.
69	**Ptc Inc.**	We incur costs to develop computer software to be licensed or otherwise marketed to customers. Research and development costs are expensed as incurred, except for costs of internally developed or externally purchased software that qualify for capitalization. Development costs for software to be sold externally incurred subsequent to the establishment of technological feasibility, but prior to the general release of the product, are capitalized and, upon general release, are amortized using the greater of either the straight-line method over the expected life of the related products or based upon the pattern in which economic benefits related to such assets are realized. The straight-line method is used if it approximates the same amount of expense as that calculated using the ratio that current period gross product revenues bear to total anticipated gross product revenues. These assets are included in acquired intangible assets in the accompanying Consolidated Balance Sheets.	Footnotes have no discussion of capitalization of commissions	Footnotes have no discussion of ASU 2018-15

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
70	Qad Inc	The Company capitalizes software development costs incurred in connection with the localization and translation of its products once technological feasibility has been achieved based on a working model. A working model is defined as an operative version of the computer software product that is completed in the same software language as the product to be ultimately marketed, performs all the major functions planned for the product and is ready for initial customer testing (usually identified as beta testing). In addition, the Company capitalizes software purchased from third parties or through business combinations as acquired software technology, if the related software under development has reached technological feasibility	The Company's incremental direct costs of obtaining a contract consist of sales commissions and sales agent fees which are deferred and amortized ratably over the term of economic benefit which the Company has determined to be five years. These deferred costs are classified as current or non-current based on the timing of when the Company expects to recognize the expense. Incremental costs related to renewals are expensed as incurred because the term of economic benefit is one year or less. The current and non-current portions of deferred commissions are included in other current assets and other long-term assets, respectively, in the Company's Consolidated Balance Sheets. Costs to fulfill a contract, which are incurred upon initiation of certain services contracts and are related to initial customer setup, are included in other current assets and long-term assets in the Company's Consolidated Balance Sheets. These costs are amortized over the term of economic benefit which the Company has determined to be five years.	Footnotes have no discussion of ASU 2018-15
71	Qualys, Inc.	Costs incurred in the development phase are capitalized and amortized over the product's estimated useful life, which is three years. Capitalized costs include salaries, benefits and stock-based compensation charges for employees that are directly involved in developing its cloud security platform during the post planning and implementation phases. Capitalized costs related to internally developed software under development are treated as construction in progress until the program, feature or functionality is ready for its intended use, at which time amortization commences. These capitalized costs are included in other noncurrent assets on the consolidated balance sheets. Amortization of internally developed software is recorded in cost of revenues. Costs associated with minor enhancements and maintenance are expensed as incurred. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.	Footnotes have no discussion of capitalization of commissions	n 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 related to internal-use software. ASU 2018-15 is effective for the Company beginning in the first quarter of fiscal 2020 and early adoption is permitted. The Company is currently evaluating the impact of this ASU on its consolidated financial statements
72	Qumu Corp	Costs related to research, design and development of products are expensed to research and development as incurred. Software development costs are capitalized beginning when a product's technological feasibility has been established and ending when a product is available for general release to customers. The Company uses the working model approach to determine technological feasibility. The Company's products are released soon after technological feasibility has been established. As a result, the Company has not capitalized any software development costs because such costs have not been significant.	Sales commissions represent the direct incremental costs related to the acquisition of customer contracts. The Company recognizes commissions as sales and marketing expense at the time the associated product revenue is recognized, requiring establishment of a deferred cost in the event a commission is paid prior to recognition of revenue. The deferred commission amounts are recoverable through the related future revenue streams under non-cancellable customer contracts and commission clawback provisions in the Company's sales compensation plans.	Footnotes have no discussion of ASU 2018-15
73	Rapid7, Inc.	Software development costs associated with the development of products for sale are recorded to research and development expense until technological feasibility has been established for the product. Once technological feasibility is established, all software costs are capitalized until the product is available for release to customers. To date, the software development costs have not been capitalized as we believe our current software development process is essentially completed concurrently with the establishment of technological feasibility. As such, these costs are expensed as incurred and recognized in research and development expenses in our consolidated statements of operations. With respect to software developed for internal use, we capitalize qualifying internal costs, such as payroll and benefits of those employees directly associated with the development of the software, and other qualifying consulting costs. Costs incurred during the preliminary planning and evaluation and post implementation stages of the project are expensed as incurred. Costs incurred during the application development stage of the project are capitalized.	Comparative prior periods were not adjusted. In accordance with ASC 606, we capitalize commission expenses paid to internal sales personnel and partner referral fees that are incremental costs to obtaining customer contracts. These costs are recorded as deferred contract acquisition costs on the consolidated balance sheets. Costs to obtain a contract for a new customer, up-sell or cross-sell are amortized on a straight-line basis over an estimated period of benefit of five years as sales commissions on initial sales are not commensurate with sales commissions on contract renewals. We determined the estimated period of benefit by taking into consideration the contractual term and expected renewals of customer contracts, our technology and other factors, including the fact that commissions paid on renewals are not commensurate with commissions paid on initial sales transactions. We periodically review the carrying amount of deferred contract acquisition costs to determine whether events or changes in circumstances have occurred that could impact the period of benefit. Commissions paid relating to contract renewals are deferred and amortized on a straight-line basis over the related renewal period. Costs to obtain a contract for professional services arrangements are expensed as incurred in accordance with the practical expedient as the contractual period of our professional services arrangements are one year or less.	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, which aligns the requirements for capitalizing implementation costs in cloud computing arrangements with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The new standard will be effective for us in the first quarter of 2020. Entities can choose to adopt the new guidance prospectively or retrospectively. We plan to adopt this standard using the prospective adoption approach, however we are currently in the process of evaluating the effects of this pronouncement on our consolidated financial statements.
74	Realpage Inc	The Company capitalizes certain internal-use software development costs incurred during development stage activities, if direct and incremental, until the software is substantially complete and ready for its intended use. The Company capitalizes certain costs related to internal-use software upgrades and enhancements when it is probable the expenditures will result in significant additional functionality. Auditing the Company's capitalization of internal-use software development costs was especially challenging because management's determination of which costs qualify for capitalization requires significant judgment, as only those costs incurred during certain stages of software development that result in significant additional functionality can be capitalized in accordance with the applicable accounting standards.	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.	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. We plan to adopt this guidance prospectively to eligible costs incurred on or after January 1, 2020, and we are currently evaluating potential changes to related processes and internal controls.
75	Red Violet, Inc.	In accordance with ASC 350-40, "Software — Internal use software," the Company capitalizes eligible costs, including salaries and staff benefits, share-based compensation expense, travel expenses incurred by relevant employees, and other relevant costs of developing internal-use software that are incurred in the application development stage when developing or obtaining software for internal use. Once the software developed for internal use is ready for its intended use, it is amortized on a straight-line basis over its useful life.	Footnotes have no discussion of capitalization of commissions	In August 2018, FASB issued ASU No. 2018-15 ("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," which requires an entity (customer) in a hosting arrangement that is a service contract to follow the guidance in Subtopic 350-40 to determine which implementation costs to capitalize as an asset related to the service contract and which costs to expense. It also requires the entity (customer) to expense the capitalized implementation costs of a hosting arrangement that is a service contract over the term of the hosting arrangement, which includes reasonably certain renewals. This guidance will be effective for the Company for annual reporting periods beginning after December 15, 2020, on a retrospective or prospective basis and early adoption is permitted. The Company is currently evaluating the impact this guidance will have on its consolidated financial statements and related disclosures.
76	Rosetta Stone Inc	The Company capitalizes software development costs related to certain of its software platforms developed exclusively to provide its web-based subscription services and other general and administrative use software in accordance with ASC subtopic 350-40: Internal-Use Software. Development costs for internal-use software are expensed as incurred until the project reaches the application development stage. Internal-use software is defined to have the following characteristics: (a) the software is internally developed, or modified solely to meet the Company's internal needs, and (b) during the software's development or modification, no substantive plan exists or is being developed to market the software externally. Internally developed software is amortized over a three -year useful life.	The Company recognizes an asset for the incremental costs of obtaining a contract with a customer, which primarily represents sales commissions paid when a customer contract is either recorded as revenue or deferred revenue. Sales commission consists of variable commissions paid to salespeople as well as third party costs such as fees associated with sales made in App stores. Sales commissions paid to obtain non-cancellable subscription contracts are deferred and amortized in proportion to the period over which the revenue is recognized from the related contract. Deferred sales commissions are amortized to sales and marketing expense on the consolidated statements of operations. Deferred sales commissions are classified as non-current unless the associated amortization period is one year or less.	Footnotes have no discussion of ASU 2018-15
77	Sailpoint Technologies Holdings, Inc.	Software development costs for products intended to be sold, leased or otherwise marketed are expensed as incurred until technological feasibility has been established, at which time such costs are capitalized until the product is available for general release to customers. Technological feasibility is established when a product design and working model have been completed and the completeness of the working model and its consistency with the product design have been confirmed by testing. To date, the establishment of technological feasibility of the Company's products and general release of such software have substantially coincided.	Under ASC 606, sales commissions paid to our sales force and the related employer payroll taxes, collectively "deferred contract acquisition costs", are considered incremental and recoverable costs of obtaining a contract with a customer. The Company capitalizes and amortizes incremental costs of obtaining a contract, such as certain sales commission costs and related payroll taxes, over the remaining contractual term or over an expected period of benefit. The Company typically pays sales commissions for both initial and follow-on sales of perpetual licenses, inclusive of initial maintenance, term licenses and subscription offerings. Initial commissions are allocated to each performance obligation within the contract. The portion allocated to the perpetual license element is expensed at the time the license is delivered. Commissions allocated to the remaining elements are capitalized and amortized over an expected period of benefit. The Company has determined the expected period of benefit to be approximately five years. In addition, the Company pays sales commissions for renewals of term licenses and subscription offerings at a lower rate, which is therefore not commensurate with commissions paid on an initial sale. These renewal commissions are amortized over each renewal's contractual term. The Company does not pay sales commissions on renewals of maintenance agreements related to perpetual licenses. The current portion of these capitalized costs are recorded in prepayments and other current assets and non-current portion is included in other non-current assets, in our consolidated balance sheets. Previously under ASC 605, the Company generally capitalized deferred contract costs associated with subscription revenues, which were subsequently amortized over the term of the subscription while deferred contract cost related to license revenues were previously recognized as incurred. We determined the period of benefit by taking into consideration our customer contracts, customer turnover rates, the life of our technology and other factors. In the adoption of ASC 606, the Company applied the practical expedient to expense costs as incurred if the expected amortization period is one year or less. Amortization of deferred contract acquisition costs is included in sales and marketing expenses in the accompanying consolidated statements of operations. There were no material impairments to deferred contract acquisition costs for all periods presented.	In August 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standard Update (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 (ASU 2018-15), which clarifies the accounting for implementation costs in cloud computing arrangements. ASU 2018-15 is effective for public entities for annual periods, including interim periods within those annual periods beginning after December 15, 2019 and earlier adoption is permitted. The Company does not plan to early adopt, and therefore plans to adopt for the annual period beginning after December 15, 2019 on a prospective basis. The Company does not anticipate this standard will have a material impact upon adoption of ASU 2018-15 on our consolidated financial statements.
78	Salesforce Com Inc	The Company capitalizes costs related to its enterprise cloud computing services and certain projects for internal use incurred during the application development stage. Costs related to preliminary project activities and post implementation activities are expensed as incurred. Internal-use software is amortized on a straight-line basis over its estimated useful life, which is generally three to five years. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.	The Company capitalizes incremental costs of obtaining a non-cancelable subscription and support revenue contract. The capitalized amounts consist primarily of sales commissions paid to the Company's direct sales force. Capitalized amounts also include (1) amounts paid to employees other than the direct sales force who earn incentive payouts under annual compensation plans that are tied to the value of contracts acquired, (2) commissions paid to employees upon renewals of subscription and support contracts, (3) the associated payroll taxes and fringe benefit costs associated with the payments to the Company's employees, and to a lesser extent (4) success fees paid to partners in emerging markets where the Company has a limited presence. Costs capitalized related to new revenue contracts are amortized on a straight-line basis over four years, which, although longer than the typical initial contract period, reflects the average period of benefit, including expected contract renewals. In arriving at this average period of benefit, the Company evaluated both qualitative and quantitative factors which included the estimated life cycles of its offerings and its customer attrition. Additionally, the Company amortizes capitalized costs for renewals and success fees paid to partners over two years.	Footnotes have no discussion of ASU 2018-15
79	Secureworks Corp	Qualifying software costs developed for internal use are capitalized when application development begins, it is probable that the project will be completed, and the software will be used as intended. In order to expedite delivery of the Company's security solutions, the application stage typically commences before the preliminary development stage is completed. Accordingly, no significant software development costs have been capitalized during any period presented. The Company capitalizes development costs incurred for software and applications to be sold, leased or otherwise marketed after technological feasibility of the software or application is established. Under the Company's current practice of developing new software, the technological feasibility of the underlying software or application is not established until substantially all product development and testing is complete, which generally includes the development of a working model. Software development costs that have been capitalized to date have been insignificant.	The Company's customer acquisition costs are primarily attributable to sales commissions and related fringe benefits earned by the Company's sales force and such costs are considered incremental costs to obtain a contract. Sales commissions for initial contracts are deferred and amortized taking into consideration the pattern of transfer to which assets relate and may include expected renewal periods where renewal commissions are not commensurate with the initial commission period. The Company recognizes the deferred commissions on a straight-line basis over the life of the customer relationship (estimated to be six years) in sales and marketing expenses. These assets are classified as non-current, and included in other non-current assets in the Consolidated Statements of Financial Position.	Intangibles - Goodwill and Other - Internal-Use Software. In August 2018, the FASB issued ASU No. 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." ASU No. 2018-15 aligns the requirements for capitalizing implementation costs in such cloud computing arrangements with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The updated guidance is effective for the Company for annual and interim periods beginning in the Company's 2021 fiscal year, with early adoption permitted. Entities may choose to adopt the new guidance prospectively or retrospectively. The Company does not expect that the adoption of this standard will have a material impact on its consolidated financial statements.

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
80	Servicenow, Inc.	Software development costs for software to be sold, leased, or otherwise marketed are expensed as incurred until the establishment of technological feasibility, at which time those costs are capitalized until the product is available for general release to customers and amortized over the estimated life of the product. Technological feasibility is established upon the completion of a working prototype that has been certified as having no critical bugs and is a release candidate. To date, costs and time incurred between the establishment of technological feasibility and product release have not been material, and all software development costs have been charged to research and development expense in our consolidated statements of comprehensive income (loss). Costs incurred to develop our internal administration, finance and accounting systems are capitalized during the application development stage and generally amortized over the software's estimated useful life of three to five years. Costs related to preliminary project activities and post implementation activities are expensed as incurred.	Deferred commissions are the incremental selling costs that are associated with acquiring customer contracts and consist primarily of sales commissions paid to our sales force and referral fees paid to independent third parties. Capitalized sales commissions also include the associated payroll taxes and fringe benefit costs associated with payments to our sales employees to the extent they are incremental. Commissions and referral fees earned upon the execution of initial and expansion contracts are primarily deferred and amortized over a period of benefit that we have determined to be five years. Commissions earned upon the renewal of customer contracts are deferred and amortized over the average renewal term. Additionally, for self-hosted offerings, consistent with the recognition of subscription revenues for self-hosted offerings, a portion of the commission cost is expensed upfront when the self-hosted offering is made available. The determination of the period of benefit requires significant judgment by taking into consideration our customer contracts, our technology life cycle and other factors. We include amortization of deferred commissions in sales and marketing expense in our consolidated statements of comprehensive income (loss).	n 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," which 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. The new standard requires capitalized costs to be amortized on a straight-line basis generally over the term of the arrangement, and the financial statement presentation for these capitalized costs would be the same as that of the fees related to the hosting arrangements. This new standard is effective for our interim and annual periods beginning January 1, 2020 and earlier adoption is permitted. This standard could be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. We will adopt this standard on a prospective basis as of January 1, 2020. We do not anticipate that the adoption of this standard will have a material impact on our consolidated financial statements.
81	Shotspotter, Inc	Costs incurred to develop software for internal use and for the Company's solutions are capitalized and amortized over such software's estimated useful life. Internally developed software costs capitalized during all periods presented have not been material. Property and equipment, net also includes software technology resulting from the Company's acquisition of HunchLab, which is recorded at fair value as of the date of the acquisition, amortized on the straight-line basis over five years.	The Company capitalizes certain incremental costs of obtaining a contract, which includes sales commissions. As there are not commensurate commissions earned on renewals of the subscription services, the Company capitalizes commissions related to subscription services provided under both the initial contract and renewal periods and amortizes the capitalized commissions on a straight-line basis over the customer life, which is determined to be five years. For commissions that are earned on renewal contracts with an original duration of one year or less, the Company uses the practical expedient applicable to such commissions and recognizes the commissions immediately as expense instead of capitalizing.	Footnotes have no discussion of ASU 2018-15
82	Slack Technologies Inc	The Company capitalizes qualifying internal-use software development costs that are incurred during the application development stage. Capitalization of costs begins when two criteria are met: (i) the preliminary project stage is completed and (ii) it is probable that the software will be completed and used for its intended function. Capitalization ceases when the software is substantially complete and ready for its intended use, including the completion of all significant testing. Costs related to preliminary project activities and post-implementation operating activities are expensed as incurred. Capitalized costs are included in property and equipment. These costs are amortized over the estimated useful life of the software (generally two years) on a straight-line basis. Management evaluates the useful life of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. The amortization of costs related to the platform applications is included in cost of revenue.	Sales commissions earned by the Company's sales force are considered to be incremental and recoverable costs of obtaining a contract with a customer. As a result, these amounts have been capitalized as deferred contract acquisition costs within prepaid expenses and other current assets and other assets on the accompanying consolidated balance sheets. Deferred contract acquisition costs are typically amortized over a period of benefit of four years. The period of benefit is estimated by considering factors such as historical customer attrition rates, the useful life of the Company's technology, and the impact of competition in its industry as well as other factors. Amortized costs are included in sales and marketing expense in the accompanying consolidated statements of operations.	In August 2018, the FASB issued ASU No. 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, which aligns the accounting for implementation costs incurred in a hosting arrangement that is a service contract with the accounting for implementation costs incurred to develop or obtain internal-use software under ASC 350-40, in order to determine which costs to capitalize and recognize as an asset and which costs to expense. ASU No. 2018-15 is effective for annual reporting periods beginning after December 15, 2019, and interim periods within those years, and can be applied either prospectively to implementation costs incurred after the date of adoption or retrospectively to all arrangements. The Company does not believe this standard will have a material impact on its consolidated financial statements.
83	Smartsheet	The Company capitalizes certain qualifying costs incurred during the application development stage in connection with the development of internal-use software. Costs related to preliminary project activities and post-implementation activities are expensed in research and development ("R&D") as incurred. R&D expenses consist primarily of employee-related costs, hardware- and software-related costs, costs of outside services used to supplement our internal staff, and overhead allocations. Capitalized software development costs are included within property and equipment, net on the balance sheets, and are amortized over the estimated useful life of the software, which is typically three years. The related amortization expense is recognized in the consolidated statements of comprehensive loss within the function that receives the benefit of the developed software. The Company evaluates the useful lives of these assets and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.	The majority of sales commissions earned by our sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commission are paid on initial contracts and on any upsell contracts with a customer. No sales commissions are paid on customer renewals. Sales commissions are deferred and then amortized on a straight-line basis over a period of benefit that we have determined to be three years. We determined the period of benefit by taking into consideration our customer contracts, expected customer life, the expected life of our technology and other factors. Amortization expense is included in sales and marketing expenses in the accompanying statements of operations.	In August 2018, the FASB issued ASU 2018-15, Intangibles - Goodwill and Other-Internal-Use Software ("ASU 2018-15"), which 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. This guidance is effective for interim and annual reporting periods beginning after December 15, 2019, and early adoption is permitted. The Company does not expect adoption of this ASU to have a material effect on the Company's consolidated financial statements.
84	Smith Micro Software, Inc.	Development costs incurred in the research and development of new software products and enhancements to existing software products are expensed as incurred until technological feasibility has been established. The Company considers technological feasibility to be established when all planning, designing, coding, and testing has been completed according to design specifications. After technological feasibility is established, any additional costs are capitalized.	We generally pay sales commissions to our sales force, which are incremental and recoverable costs of acquiring contracts. In most instances, sales commissions are only paid when we earn usage based fees on the contracts. The commission obligation is established each quarter based on the usage based fees earned. The commission obligation is not adjusted by future usage based fees earned, that is each period is discrete from the other. As a result of the structure of the commission plan, we record the commission expense when the commission obligation is determined, which is generally quarterly. We introduced an amended and restated sales commission plan that incentivizes and recognizes the efforts of eligible participants to earn commissions on future revenue generated on new contracts, sale of a new product to an existing contract, or sale of a new product to a different group within an existing customer. The sales commissions are tiered based on the opportunity size. Sales commissions paid under this amended sales commission plan are incremental contract acquisition costs, and accordingly are recorded as a deferred contract asset that is amortized on a straight-line basis over the average contract life of the new, renewed and modified contract.	Footnotes have no discussion of ASU 2018-15
85	Solarwinds Corporation	We capitalize costs related to developing new functionality for our suite of products that are hosted and accessed by our customers on a subscription basis. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality. Costs incurred in the preliminary stages of development are expensed as incurred. Once an application has reached the development stage, internal and external costs, if direct and incremental, are capitalized until the software is substantially complete and ready for its intended use. Capitalized costs are recorded as part of other assets, net in our consolidated balance sheets. Maintenance and training costs are expensed as incurred. Internal-use software is amortized on a straight-line basis over its estimated useful life, generally three years, and included in cost of recurring revenue in the consolidated statements of operations. There were no impairments to internal-use software and we did not incur any significant website development costs during the periods presented.	Deferred commissions, which consist of direct and incremental sales commissions and related fringe benefits, are capitalized using the portfolio approach if we expect to benefit from those costs for more than one year. Deferred commissions are allocated to each performance obligation within the contract and amortized on a straight-line basis over the expected benefit period of the related performance obligations. We expense commissions as incurred when the expected amortization period is one year or less. Deferred commissions allocated to new maintenance arrangements and certain SaaS offerings are amortized over an average expected benefit period of approximately four to six years which was determined based on the expected life of our technology. Deferred commissions allocated to perpetual licenses, maintenance renewal arrangements and MSP offerings are expensed as incurred. Deferred commissions are classified as current or non-current assets based on the timing the expense will be recognized. The current and non-current portions of our deferred commissions are included in prepaid and other current assets and other assets, net respectively, in our consolidated balance sheets. The amortization of our deferred commissions is included in sales and marketing expense in our consolidated statement of operations.	Footnotes have no discussion of ASU 2018-15
86	Splunk Inc	Capitalization of software development costs for software to be sold, leased, or otherwise marketed begins upon the establishment of technological feasibility, which is generally the completion of a working prototype that has been certified as having no critical bugs and is a release candidate. Amortization begins once the software is ready for its intended use, generally based on the pattern in which the economic benefits will be consumed Costs related to software developed, acquired, or modified for internal use, are capitalized. Costs incurred during the preliminary planning and evaluation stage of the project and during post implementation operational stage are expensed as incurred. Costs incurred during the application development stage of the project are capitalized. We define the design, configuration, and coding process as the application development stage.	Sales commissions paid to our sales force and the related payroll taxes are considered incremental and recoverable costs of obtaining a contract with a customer. These costs are capitalized and included in "Deferred commissions, current and non-current" on our consolidated balance sheets. We generally amortize these costs over the remaining contractual term of our customer contracts, consistent with the pattern of revenue recognition of each performance obligation, for contracts in which the commissions paid on the initial and renewal contracts are commensurate. For certain contracts in which the commissions paid on the initial and renewal contracts are not commensurate, we amortize the commissions paid on the initial contract over an expected period of benefit, which we have determined to be approximately five years. We have determined the period of benefit by taking into consideration our customer contracts, the duration of our relationships with our customers and our technology. In capitalizing and amortizing deferred commissions, we have elected to apply a portfolio approach. We include amortization of deferred commissions in "Sales and marketing expense" on our consolidated statements of operations. There were no impairments to deferred commissions for all periods presented.	Accounting Standards Update ("ASU") No. 2018-15 (Subtopic 350-40), Intangibles - Goodwill and Other - Internal-Use Software: Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract. The standard aligns the requirements for capitalizing implementation costs in a cloud computing arrangement with the requirements for capitalizing implementation costs incurred for an internal-use software license We early adopted this new standard as of May 1, 2019. The adoption of this new standard did not have a material impact on our consolidated financial statements.
87	Sprout Social, Inc	Footnotes have no discussion of capitalization of SW development costs	Sales force commissions are considered incremental costs of obtaining a contract with a customer. Sales commissions are paid on initial contracts with new customers and for expansion of contracts with existing customers. No commissions are paid on customer renewals. Sales commissions are deferred and amortized on a straight-line basis over a period of benefit of three years, as determined by the Company. The Company determined the three-year period by taking into consideration the products sold, expected customer life, expected contract renewals, technology life cycle and other factors. Amortization expense is included as a component of sales and marketing expense.	Footnotes have no discussion of ASU 2018-15
88	Sps Commerce Inc	We capitalize and amortize eligible costs to acquire or develop internal-use software that are incurred during the application development stage. Costs incurred during the preliminary project stage and post-implementation stage are expensed as incurred. Internal-use software is depreciated over the estimated useful life, commencing on the date when the asset is ready for its intended use. Depreciation is computed using the straight-line method. Maintenance and enhancements of internal-use software are expensed as incurred. The assets and related accumulated depreciation and amortization are adjusted for asset retirements and disposals and abandoned internal-use software with the resulting gain or loss included in our consolidated statements of comprehensive income.	Deferred costs consist of costs to obtain customer contracts, such as commissions paid to sales personnel and to third-party partners for customer referrals, and costs to fulfill customer contracts, such as customer implementation costs. Sales commissions relating to recurring revenues are considered incremental and recoverable costs of obtaining a contract with our customer. These commissions are calculated based on estimated annual recurring revenue to be generated over the customer's initial contract period. These costs are deferred and amortized over the expected period of benefit, which we have determined to be two years. Amortization expense is included in sales and marketing expenses in the accompanying consolidated statements of comprehensive income. Customer implementation costs are considered incremental and recoverable costs of obtaining a contract with our customer. These costs are deferred and amortized over the expected period of benefit, which we have determined to be two years. Amortization expense is included in cost of revenues in the accompanying consolidated statements of comprehensive income.	Footnotes have no discussion of ASU 2018-15
89	Square, Inc.	The Company capitalizes certain cost incurred in developing internal-use software when capitalization requirements have been met. Costs prior to meeting the capitalization requirements are expensed as incurred. Capitalized costs are included in property and equipment, net, and amortized on a straight-lined basis over the estimated useful life of the software and included in product development costs on the consolidated statements of operations.	Footnotes have no discussion of capitalization of commissions	n August 2018, the FASB issued ASU 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract, which is intended to align the requirements for capitalization of implementation costs incurred in a cloud computing arrangement that is a service contract with the existing guidance for internal-use software. This guidance is effective for financial statements issued for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years, with early adoption permitted. The guidance provides flexibility in adoption, allowing for either retrospective adjustment or prospective adjustment for all implementation costs incurred after the date of adoption. The Company does not expect the adoption of this guidance to have a material impact on the consolidated financial statements and related disclosures.
90	Ss&C Technologies Holdings Inc	Significant management judgement is required in determining what projects and costs associated with software development will be capitalized and in assigning estimated economic lives to the completed projects. Management specifically evaluates software development projects and analyzes the percentage of completion as compared to the initial plan and subsequent forecasts, milestones achieved and the commitments to continue funding the projects. Significant changes in any of these items may result in discontinuing capitalization of development costs, as well as immediately expensing previously capitalized costs. We review, on a quarterly basis, our capitalized software for possible impairment.	Prior to the adoption of ASC 606, we previously expensed these costs over the length of the initial contract excluding any renewals. The expected customer relationship period is determined based on average historical customer relationship periods, including expected renewals. Expected renewal periods are only included in the expected customer relationship period if commission amounts paid upon renewal are not commensurate with amounts paid on the initial contract. Incremental costs of obtaining a contract include only those costs we incur to obtain a contract that we would not have incurred if the contract had not been obtained. We have determined that certain commissions programs meet the requirements to be capitalized. Certain sales commissions associated with multi-year contracts are subject to an employee service requirement. As an action other than each party approving the contract is required to trigger payment of these sales commissions, they are not considered incremental costs to obtain a contract and are expensed as incurred. These costs are included in selling and marketing and general and administrative expenses. We expense sales commissions as incurred when the amortization period would have been one year or less.	Footnotes have no discussion of ASU 2018-15

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
91	**Survey Moneky**	The Company incurs development costs relating to its online survey platform as well as other software solely for internal-use. Costs relating to the planning and post-implementation phases of development are expensed as incurred. Costs incurred in the development phase are capitalized and included in capitalized internal-use software, net and amortized over their estimated useful life, generally three years. Maintenance and training costs are expensed as incurred.	Certain commissions earned by the Company's salesforce are considered to be incremental and recoverable costs of obtaining a contract with a customer. Such costs are deferred and amortized on a straight-line basis over their estimated period of benefit which is generally estimated as four years. The period of benefit was estimated by considering factors such as historical customer attrition rates, the useful life of the Company's technology, and the impact of competition in its industry.	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* ("ASU 2018-15"). ASU 2018-15 amends current guidance to align the accounting for costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing costs associated with developing or obtaining internal-use software. Capitalized implementation costs must be expensed over the term of the hosting arrangement and presented in the same line item in the statement of income as the fees associated with the hosting element (service) of the arrangement. ASU 2018-15 is effective for public companies with fiscal years beginning after December 15, 2019, with early adoption permitted. The Company adopted ASU 2018-15 as of January 1, 2019 on a prospective basis with no material impact upon adoption.
92	**Symantec Corp**	The costs for the development of new software products and substantial enhancements to existing software products are expensed as incurred until technological feasibility has been established, at which time any additional costs would be capitalized in accordance with the accounting guidance for software. Because our current process for developing software is essentially completed concurrently with the establishment of technological feasibility, which occurs upon the completion of a working model, no costs have been capitalized for any of the periods presented. We capitalize qualifying costs incurred during the application development stage related to software developed for internal-use and enterprise cloud computing services and amortize them over the estimated useful life of 3 years. We expense costs incurred related to the planning and post-implementation phases of development as incurred	Sales commissions that are incremental to obtaining a customer contract for which revenue is deferred are accrued and capitalized and subsequently amortized to sales and marketing expense on a straight-line basis over three years, the expected period of benefit. In arriving at the average period of benefit, we evaluate both qualitative and quantitative factors which include historical customer renewal rates, anticipated renewal periods, and the estimated useful life of the underlying product sold as part of the transaction. Commissions paid on renewals of support and maintenance are not commensurate with the initial commissions paid, and therefore the amortization period of commissions for initial contracts considers the estimated term of specific anticipated renewal contracts over the life of the customer.	Footnotes have no discussion of ASU 2018-15
93	Synopsys Inc	Intangible assets consist of acquired technology, certain contract rights, customer relationships, trademarks and trade names, capitalized software, and in-process research and development. These intangible assets are acquired through business combinations, direct purchases, or internally developed capitalized software. Intangible assets are amortized on a straight-line basis over their estimated useful lives which range from one to ten years, except for in-process research and development (IPR&D) projects not yet completed. IPR&D assets are amortized over their estimated useful lives upon completion or are written off upon abandonment.	The incremental costs of obtaining a contract with a customer, which consist primarily of direct sales commissions earned upon execution of the contract, are required to be capitalized under ASC 340-40 and amortized over the estimated period of which the benefit is expected to be received. As direct sales commissions paid for renewals are commensurate with the amounts paid for initial contracts, the deferred incremental costs will be recognized over the contract term.	Footnotes have no discussion of ASU 2018-15
94	**Tenable Holdings, Inc.**	Software developed for internal use, with no substantive plans to market such software at the time of development, are capitalized and included in property and equipment, net in the consolidated balance sheets. Costs incurred during the preliminary planning and evaluation and post implementation stages of the project are expensed as incurred. Costs incurred during the application development stage of the project are capitalized.	Sales commissions, including related incremental fringe benefit costs, are considered to be incremental costs of obtaining a contract, and therefore are deferred over an estimated period of benefit, which ranges between three and four years for subscription arrangements and five years for perpetual license arrangements. We have estimated the period of benefit based on the expected contract term including renewal periods, the lifecycle of our technology and other factors. Sales commissions on contract renewals are capitalized and amortized ratably over the contract term, with the exception of contracts with renewal periods that are one year or less, in which case the incremental costs are expensed as incurred. While we believe that the estimates we have made are reasonable and appropriate, different assumptions and estimates could materially impact our reported financial results.	n August 2018, the FASB issued ASU No. 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. Under this ASU, implementation costs related to a cloud computing arrangement that is a service contract will be capitalized consistent with the requirements for capitalizing internal-use software development costs. The capitalized implementation costs are subsequently expensed over the term of the hosting arrangement. This guidance was effective for us beginning January 1, 2020, and will be adopted on a prospective basis. We do not expect the impact of adopting this standard to be material for our consolidated financial statements.
95	**Teradata Corporation**	Direct development costs associated with internal-use software are capitalized and amortized over the estimated useful lives of the resulting software. The costs are capitalized when both the preliminary project stage is completed and it is probable that computer software being developed will be completed and placed in service. Teradata typically amortizes capitalized internal-use software on a straight-line basis over three years beginning when the asset is substantially ready for use. Costs incurred for the development of analytic database software that will be sold, leased or otherwise marketed are expensed as incurred based on the frequency and agile nature of development. The Company uses agile development methodologies to help respond to new technologies and trends and rapidly changing customer needs. Agile development methodologies are characterized by a more dynamic development process with more frequent and iterative revisions to a product release features and functions as the software is being developed. Due to the shorter development cycle and focus on rapid production associated with agile development, the Company did not capitalize any amounts for external-use software development costs in 2019, 2018 and 2017 due to the relatively short duration between the completion of the working model and the point at which a product is ready for general release. Prior capitalized costs will continue to be amortized under the greater of revenue-based or straight-line method over the estimated useful life.	The Company capitalizes sales commissions and other contract costs that are incremental direct costs of obtaining customer contracts if the expected amortization period of the asset is greater than one year. These costs are recorded in Capitalized contract costs on the Company's balance sheet. The capitalized amounts are calculated based on the sales commissions for individual multi-term contracts. The judgments made in determining the amount of costs incurred include whether the commissions are in fact incremental and would not have occurred absent the customer contract. Costs to obtain a contract are amortized as selling, general and administrative expenses on a straight-line basis over the expected period of benefit, which is typically four years.	Footnotes have no discussion of ASU 2018-15
96	**Twilio Inc**	Certain costs of platform and other software applications developed for internal use are capitalized. The Company capitalizes qualifying internal-use software development costs that are incurred during the application development stage. Capitalization of costs begins when two criteria are met: (i) the preliminary project stage is completed and (ii) it is probable that the software will be completed and used for its intended function. Capitalization ceases when the software is substantially complete and ready for its intended use, including the completion of all significant testing. The Company also capitalizes costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality. Costs incurred for maintenance, minor upgrades and enhancements are expensed. Costs related to preliminary project activities and post-implementation operating activities are also expensed as incurred. Capitalized costs of platform and other software applications are included in property and equipment. These costs are amortized over the estimated useful life of the software on a straight-line basis over three years. Management evaluates the useful life of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. The amortization of costs related to the platform applications is included in cost of revenue, while the amortization of costs related to other software applications developed for internal use is included in operating expenses.	The Company records an asset for the incremental costs of obtaining a contract with a customer, for example, sales commissions that are earned upon execution of contracts. The Company uses the portfolio of data method to determine the estimated period of benefit of capitalized commissions which is determined to be five years. Amortization expense related to these capitalized costs related to initial contracts, upsells and renewals, is recognized on a straight line basis over the estimated period of benefit of the capitalized commissions.	Footnotes have no discussion of ASU 2018-15
97	**Upland Software, Inc.**	Software development costs are expensed as incurred until the point the Company establishes technological feasibility. Technological feasibility is established upon the completion of a working model. Costs incurred by the Company between establishment of technological feasibility and the point at which the product is ready for general release are capitalized, subject to their recoverability, and amortized over the economic life of the related products. Because the Company believes its current process for developing its software products essentially results in the completion of a working product concurrent with the establishment of technological feasibility, no software development costs have been capitalized to date. There were no software development costs required to be capitalized under ASC 985-20, Costs of Software to be Sold, Leased or Marketed, and under ASC 350-40, Internal-Use Software. ASC 350-40 also requires hosting arrangements that are service contracts to follow the guidance for internal-use software to determine which implementation costs can be capitalized. In accordance with ASC 350-40, (i) capitalized implementation costs must are classified in the same balance sheet line item as the amounts prepaid for the related hosting arrangement; (ii) amortization of capitalized implementation costs are presented in the same income statement line item as the service fees for the related hosting arrangement; and (iii) cash flows related to capitalized implementation costs are presented within the same category of cash flow activity as the cash flows for the related hosting arrangement (i.e. operating activity).	Sales commissions earned by our sales force, and related payroll taxes, are considered incremental and recoverable costs of obtaining a contract with a customer. Deferred commissions and other costs for new customer contracts are capitalized upon contract signing and amortized over the expected life of the customer relationships, which has been determined to be approximately 6 years based on historical data and managements judgment in a pattern similar to how revenue is recognized. Commissions paid on renewal contracts are not commensurate with commissions paid on new customer contracts, as such, deferred commissions related to renewals are capitalized and amortized over the estimated contractual renewal term of 18 months. We utilized the 'portfolio approach' practical expedient permitted under ASC 606-10-10-4, which allows entities to apply the guidance to a portfolio of contracts with similar characteristics as the effects on the financial statements of this approach would not differ materially from applying the guidance to individual contracts. The portion of capitalized costs expected to be amortized during the succeeding twelve month period is recorded in current assets as deferred commissions, current, and the remainder is recorded in long-term assets as deferred commissions, net of current portion. Amortization expense is included in sales and marketing expenses in the accompanying consolidated statements of operations.	Footnotes have no discussion of ASU 2018-15
98	**Varonis Systems Inc**	Footnotes have no discussion of capitalization of SW development costs	We pay sales commissions to sales and marketing and certain management personnel based on their attainment of certain predetermined sales goals. Sales commissions earned by our employees are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions paid for initial contracts, which are not commensurate with sales commissions paid for renewal contracts, are capitalized and amortized over an expected period of benefit. Based on our technology, customer contracts and other factors, we have determined the expected period of benefit to be approximately four years. Sales commissions for renewal contracts are capitalized and then amortized on a straight line basis Amortization expenses related to these costs are mostly included in sales and marketing expenses in the accompanying consolidated statements of operations.	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," which 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. The new standard requires capitalized costs to be amortized on a straight-line basis generally over the term of the arrangement, and the financial statement presentation for these capitalized costs would be the same as that of the fees related to the hosting arrangements. This new standard is effective for our interim and annual periods beginning January 1, 2020, and earlier adoption is permitted. This standard could be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. The Company will adopt this standard on a prospective basis as of January 1, 2020 and does not expect this standard to have a material effect on its consolidated financial statements.
99	**Veeva Systems Inc**	We capitalize certain costs incurred for the development of computer software for internal use. We capitalize these costs during the development of the project, when it is determined that it is probable that the project will be completed, and the software will be used as intended. Costs related to preliminary project activities, post-implementation activities, training and maintenance are expensed as incurred. Internal-use software is amortized on a straight-line basis over its estimated useful life of three years, and the amortization expense is recorded as a component of cost of subscription services. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.	Footnotes have no discussion of capitalization of commissions	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," which 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. The standard is effective for interim and annual reporting periods beginning after December 15, 2019 and can be applied either prospectively to implementation costs incurred after the date of adoption or retrospectively to all arrangements. We do not expect this standard to have a material impact on our consolidated financial statements and plan to apply this standard prospectively.
100	**Vmware, Inc.**	Costs associated with internal-use software systems, including those used to provide hosted services, during the application development stage are capitalized. Capitalization of costs begins when the preliminary project stage is completed, management has committed to funding the project, and it is probable that the project will be completed and the software will be used to perform the function intended. Capitalization ceases at the point when the project is substantially complete and is ready for its intended purpose. The capitalized amounts are included in property and equipment, net on the consolidated balance sheets. Development costs of software to be sold, leased, or otherwise marketed are subject to capitalization beginning when technological feasibility for the product has been established and ending when the product is available for general release. During the years presented, software development costs incurred for products during the time period between reaching technological feasibility and general release were not material and accordingly were expensed as incurred.	Sales commissions, including the employer portion of payroll taxes, earned by VMware's sales force are considered incremental and recoverable costs of obtaining a contract, and are deferred and generally amortized on a straight-line basis over the expected period of benefit. The expected period of benefit is generally determined using the contract term or underlying technology life, if renewals are expected and the renewal commissions are not commensurate with the initial commissions. Sales commissions related to software maintenance and support renewals are deferred and amortized on a straight-line basis over the contractual renewal period.	Footnotes have no discussion of ASU 2018-15
101	**Where Food Comes From, Inc.**	Internal use software development costs represent the capitalization of certain external and internal computer software costs incurred during the application development stage. The application development stage is characterized by software design and configuration activities, coding, testing and installation. Training costs and maintenance are expensed as incurred, while upgrades and enhancements are capitalized if it is probable that such expenditures will result in additional functionality. Website software development costs related to certain planning and training costs incurred in the development of website software are expensed as incurred, while application development stage costs are capitalized. Software development costs for external sale are capitalized once technological feasibility is achieved. Capitalized costs are amortized over the expected benefit period. We generally expense a significant portion of software development costs because technological feasibility occurs very late in the software development process.	Footnotes have no discussion of capitalization of commissions	n August 2018 the FASB issued ASU 2018-15, Intangibles - Goodwill and Other - Internal Use Software - Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract, which amends the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract to align with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The update is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. There will be no material impact to the Company's financial statements with the implementation of this standard.

#	Company	Notes on Capitalization of Software Development	Notes on Capitalization of Commissions	Notes on ASU 2018-15
102	**Workiva Inc**	Footnotes have no discussion of capitalization of SW development costs	Sales commissions earned by our sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions paid where the amortization period is one year or less are expensed as incurred. All other sales commissions are deferred and then amortized on a straight-line basis over a period of benefit that we have determined to be three years. We determined the period of benefit by taking into consideration our standard contract terms and conditions, rate of technological change and other factors. Amortization expense is included in sales and marketing expense in the accompanying consolidated statements of operations.	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, which clarifies the accounting for implementation costs in cloud computing arrangements. The update will become effective for interim and annual periods beginning after December 15, 2019 and may be adopted either retrospectively or prospectively. Early adoption is permitted. We adopted this standard prospectively effective April 1, 2019. The adoption of this new guidance did not have a material impact on our consolidated financial statements.
103	**Zedge, Inc.**	The Company accounts for capitalized software and technology development costs in accordance with FASB ASC 350-40. These costs consist of internal development costs on various projects that the Company invested in specific to the various platforms on which the Company operates its service that are capitalized during the application development stage. Capitalized software and technology development costs are included in property and equipment, net and are amortized over the estimated useful life of the software, generally three years. All ordinary maintenance costs are expensed as incurred.	Footnotes have no discussion of capitalization of commissions	Footnotes have no discussion of ASU 2018-15
104	**Zoom Video Communications, Inc.**	We capitalize certain development costs related to our video-first communications platform during the application development stage. Costs incurred in the preliminary stages of development are analogous to research and development activities and are expensed as incurred. The preliminary stage includes activities such as conceptual formulation of alternatives, evaluation of alternatives, determination of existence of needed technology, and final selection of alternatives. Once the application development stage is reached, internal and external costs are capitalized until the software is substantially complete and ready for its intended use. Capitalized software development costs are recorded as part of property and equipment, net. Maintenance, minor upgrades, and training costs are expensed as incurred. Capitalized software development costs are amortized on a straight-line basis over the software's estimated useful life, which is generally three years, and are recorded in cost of revenue in the consolidated statements of operations.	We capitalize sales commissions and associated payroll taxes paid to internal sales personnel that are incremental to the acquisition of customer contracts. These costs are recorded as deferred contract acquisition costs on the consolidated balance sheets. We determine whether costs should be deferred based on our sales compensation plans and if the commissions are incremental and would not have occurred absent the customer contract. Sales commissions paid upon the initial acquisition of a customer contract are amortized over an estimated period of benefit of three years, which is typically greater than the contractual terms of the customer contracts. We do not pay sales commissions upon contract renewal. Amortization is recognized on a straight-line basis commensurate with the pattern of revenue recognition. We determine the period of benefit for commissions paid for the acquisition of the initial customer contract by taking into consideration the initial estimated customer life and the technological life of our video-first communications platform and related significant features. Amortization of deferred contract acquisition costs is included in sales and marketing expense in the consolidated statements of operations.	In August 2018, the FASB issued ASU No. 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. The amendment 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 (and hosting arrangements that include an internal-use software license). The guidance will be effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. We are currently evaluating whether the adoption of this standard will have a material impact on our consolidated financial statements.
105	**Zscaler**	We capitalize certain costs incurred during the application development stage in connection with software development for our cloud security platform. Costs related to preliminary project activities and post-implementation activities are expensed as incurred. Capitalized costs are recorded as part of property and equipment in the consolidated balance sheets. Maintenance and training costs are expensed as incurred. Capitalized interna use software is amortized on a straight-line basis over its estimated useful life, which is generally three years, and is recorded as cost of revenue in the consolidated statements of operations.	We capitalize sales commission and associated payroll taxes paid to internal sales personnel that are incremental to the acquisition of channel partner and direct customer contracts. These costs are recorded as deferred contract acquisition costs in the consolidated balance sheets. We determine whether costs should be deferred based on our sales compensation plans, if the commissions are in fact incremental and would not have occurred absent the customer contract. Sales commissions for renewal of a contract are not considered commensurate with the commissions paid for the acquisition of the initial contract given the substantive difference in commission rates in proportion to their respective contract values. Commissions paid upon the initial acquisition of a contract are amortized over an estimated period of benefit of five years while commissions paid for renewal contracts are amortized over the contractual term of the renewals. Amortization of deferred contract acquisition costs is recognized on a straight-line basis commensurate with the pattern of revenue recognition and included in sales and marketing expense in the consolidated statements of operations. We determine the period of benefit for commissions paid for the acquisition of the initial contract by taking into consideration the expected subscription term and expected renewals of our customer contracts, the duration of our relationships with our customers, customer retention data, our technology development lifecycle and other factors. We periodically review the carrying amount of deferred contract acquisition costs to determine whether events or changes in circumstances have occurred that could impact the period of benefit of these deferred costs. We did not recognize any impairment losses of deferred contract acquisition costs during the periods presented.	In August 2018, the FASB issued ASU No. 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," which 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. The new standard requires capitalized costs to be amortized on a straight-line basis generally over the term of the arrangement, and the financial statement presentation for these capitalized costs would be the same as that of the fees related to the hosting arrangements. For public business entities, this standard is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted. We early adopted this standard as of August 1, 2018 using the prospective transition method, and it did not have a material impact to our consolidated financial statements.
106	**Zuora, Inc.**	We exclude non-cash adjustments for capitalization and the subsequent amortization of internal-use software, including any impairment charges, from certain of our non-GAAP measures. We capitalize certain costs incurred for the development of computer software for internal use and then amortize those costs over the estimated useful life. Capitalization and amortization of software development costs can vary significantly depending on the timing of products reaching technological feasibility and being made generally available. Moreover, because of the variety of approaches taken and the subjective assumptions made by other companies in this area, we believe that excluding the effects of capitalized software costs allows investors to make more meaningful comparisons between our operating results and those of other companies.	The adoption of Topic 606 resulted in a significant change to the method in which the Company accounts for commissions expenses. The Company now capitalizes sales commission expenses and associated payroll taxes paid to internal sales personnel that are incremental to obtaining customer contracts. These costs are deferred and then amortized over the expected period of benefit, which is estimated to be five years. The Company has determined the period of benefit taking into consideration several factors including the expected subscription term and expected renewals of its customer contracts, the duration of its relationships with its customers, and the life of its technology. Amortization expense is included in Sales and marketing in the accompanying consolidated statements of comprehensive loss.	In August 2018, the FASB issued ASU 2018-15, Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract. This standard 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. The Company is required to adopt ASU 2018-15 beginning February 1, 2020. The Company is currently evaluating the impact of adopting this standard and does not expect the adoption to have a significant impact on its consolidated financial statements