
Quarterly Enterprise Software Market Review

2Q 2018

SHEA & COMPANY

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Shea & Company Overview

People ■ Industry Expertise ■ Process Excellence

1

Firm focused exclusively on enterprise software

2

Offices in Boston and San Francisco

17

Professionals focused on the software industry

20+

Years of experience amongst our senior bankers

>65

Transactions completed representing billions of dollars in value

Mergers & Acquisitions

- Sell-side and buy-side M&A advisory
- Divestitures
- Restructuring

Private Placements & Capital Raising

- Late-stage venture, growth equity and buyouts
- Recapitalizations
- IPO advisory

Corporate Strategy

- Corporate development advisory
- Balance sheet and capital structure review
- Fairness opinions



Public Sector & Health Care

a portfolio company of



has merged with



Shea & Company served as the exclusive financial advisor to Aptean and Vista Equity Partners



a portfolio company of



has merged with



Shea & Company served as the exclusive financial advisor to Superion and Vista Equity Partners

Superior Outcomes

Shea & Company has advised on important transactions representing billions of dollars in value across the strategic acquirer and financial investor landscape with Clients in the U.S. as well as Canada, Europe and Israel



has acquired




Shea & Company served as the exclusive financial advisor to BC Partners




has acquired



Shea & Company served as the exclusive financial advisor to MRI Software



has been acquired by



Shea & Company served as the exclusive financial advisor to BriefCam



has made an investment in



a portfolio company of



Shea & Company served as the financial advisor to Clearlake Capital



has acquired



Shea & Company served as the exclusive financial advisor to EQT



a division of



has been acquired by



Shea & Company served as the exclusive financial advisor to Mobility and Cellebrite



a portfolio company of



has been acquired by



Shea & Company served as the exclusive financial advisor to Doxim and Strattam Capital



a portfolio company of



has been acquired by



Shea & Company served as the exclusive financial advisor to Perforce and Summit Partners



has received an investment from



Shea & Company served as the exclusive financial advisor to Gurobi



a portfolio company of



has received a strategic investment from



Shea & Company served as the exclusive financial advisor to MRI Software and GI Partners



Compliance

a portfolio company of



has been acquired by



Shea & Company served as the exclusive financial advisor to Sovos Compliance and Vista Equity Partners



has been acquired by



Shea & Company served as the exclusive financial advisor to Secure Islands



has been acquired by



Shea & Company served as the exclusive financial advisor to LastPass



has been acquired by



Shea & Company served as the exclusive financial advisor to HP




a portfolio company of




has been acquired by



Shea & Company served as the exclusive financial advisor to Granicus



has been acquired by



Shea & Company served as the exclusive financial advisor to Bronto

Contents

M&A Activity

Software M&A Summary: 2013 – 2Q 2018	p. 3
Software Acquisitions: 3-Year Trend Analysis	p. 4
Publicly Available Software M&A Transaction Data: 2Q 2018	p. 5
Announced Software Acquisitions: 2Q 2018	p. 7
Most Active Software Acquirers: 2007 – 2Q 2018	p. 11

Public Equity Market Valuations

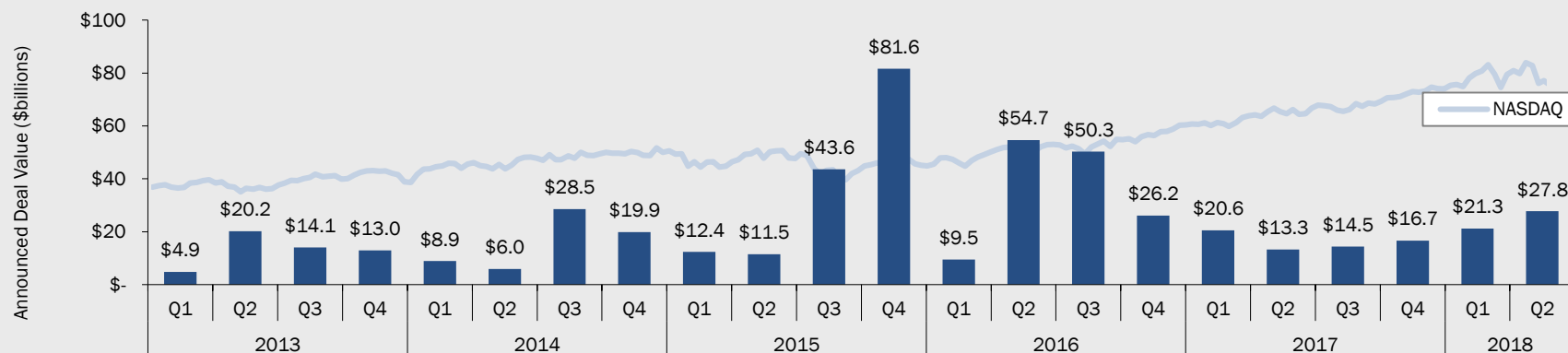
LTM Relative Performance of Shea & Company Software Indices	p. 23
Price Performance and Valuation Metrics by Segment	p. 24
Equity Trading Multiples by Growth Tranche	p. 25
Price Performance and Valuation Metrics of Selected Software Vendors	p. 26
Equity Trading Multiples by Segment	p. 27
Equity Trading Multiples by Comparable Subset	p. 34

Equity Financing Activity

Software IPOs: 2Q 2018	p. 38
Software IPO Pricing & Performance Data	p. 39
Software IPO Pipeline	p. 40
Software Private Capital Raise Activity: 2Q 2018	p. 41

M&A Activity

Software M&A Summary: 2013 – 2Q 2018



Transaction Count by Deal Size

Deal Size	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
> \$1bn	2	4	4	5	2	0	6	4	3	3	5	4	2	9	14	5	5	2	3	5	5	8
\$500m - \$1bn	0	5	5	2	3	2	3	7	2	3	4	6	3	7	4	8	3	2	5	2	2	0
\$250m - \$500m	0	3	1	4	2	4	4	6	4	3	3	12	4	6	4	3	6	4	11	4	6	4
< \$250m	40	33	31	52	39	65	44	56	38	41	32	46	34	48	33	25	33	42	29	24	34	27
No Reported Value	102	118	128	121	114	153	156	126	156	129	104	146	169	194	173	146	173	189	175	136	175	152
Total	144	163	169	184	160	224	213	199	203	179	148	214	212	264	228	187	220	239	223	171	222	191

Notable Announced Transactions: 2Q 2018 (\$ millions)

Acquirer	VERITAS CAPITAL	HCL	Trimble	CISCO	IHS Markit	ROPER	Microsoft	workday	CBRE	SYNNEX CORPORATION
Target	Healthcare IT assets	Qaction	VIEWPOINT CONSTRUCTION SOFTWARE	ACCOMPANY	IPREO	POWERPLAN	GitHub	Adaptive Insights	facilitysource	CONVERGYS
Date	04/02/18	04/12/18	04/23/18	05/01/18	05/21/18	05/21/18	06/04/18	06/11/18	06/12/18	06/28/18
Enterprise Value	\$1,050	\$330	\$1,200	\$270	\$1,855	\$1,100	\$7,500	\$1,556	\$290	\$2,519
EV / LTM Rev	n/a	n/a	n/a	n/a	6.4x	n/a	n/a	13.6x	n/a	0.9x
EV / LTM EBITDA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a	9.0x

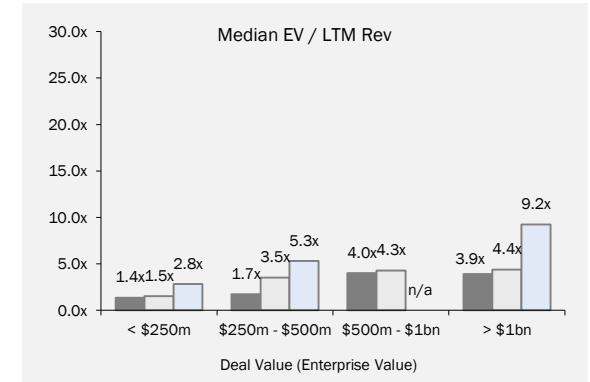
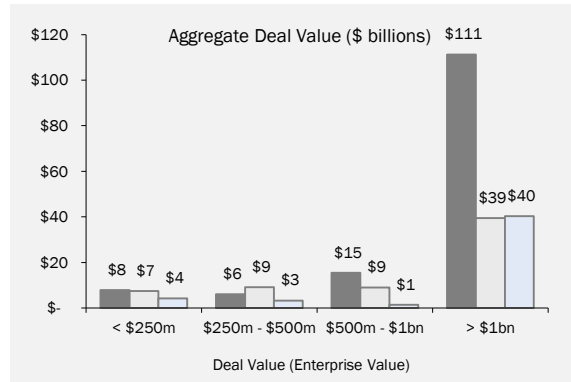
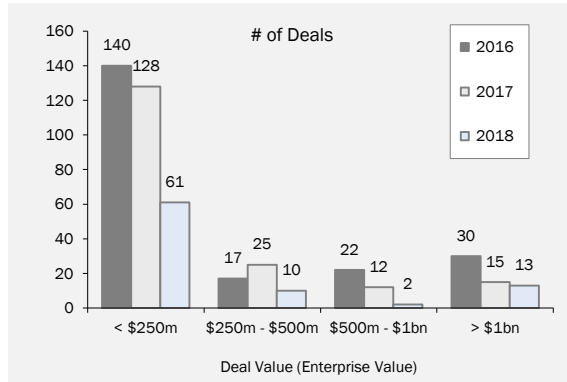
Sources: Company releases, Wall Street research

Note: EV / Revenue multiples greater than 20x and EV / EBITDA multiples greater than 50x are considered to be not meaningful

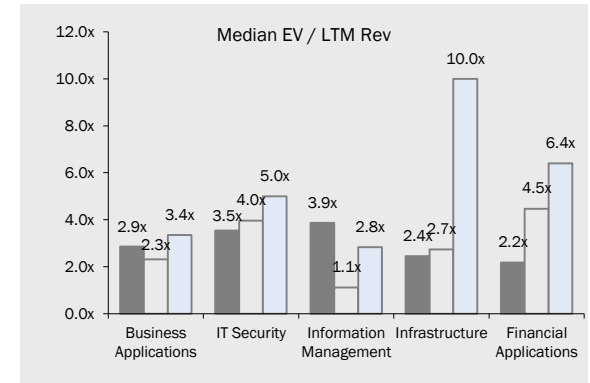
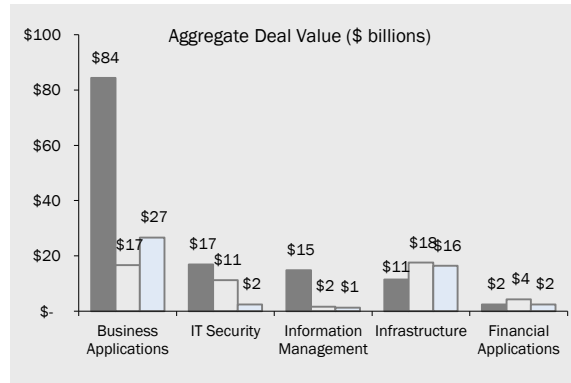
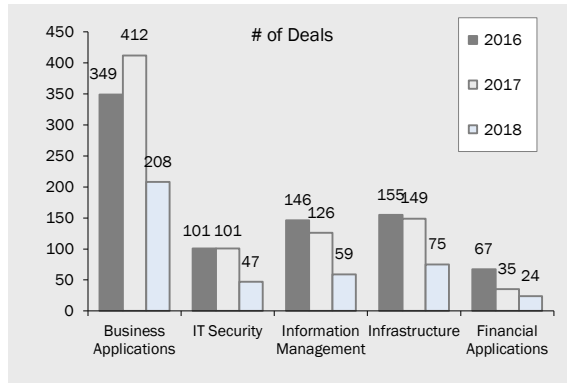
M&A Activity

Software Acquisitions: 3-Year Trend Analysis

By Transaction Size (2016 - 2Q 2018)



By Target Segment (2016 - 2Q 2018)



Notes:

Business Applications includes: Advertising Technology; Communications; ERP & Business Applications; Marketing Applications; Technical & Embedded Applications

Information Management includes: Business Intelligence; Content Management

Infrastructure includes: Application Delivery & Network Acceleration; IT Operations Management; IT Security; Platforms, Development Tools & Deployment; Storage Management

Sources: Company releases, Wall Street research

M&A Activity

Publicly Available Software M&A Transaction Data: 2Q 2018

(\$ millions)

Announced	Target	Acquirer(s)	Consideration		Equity Value	Enterprise Value	EV / Revenue			EV / EBITDA		
			% Cash	% Stock			LTM	Current yr	Fwd yr	LTM	Current yr	Fwd yr
06/28/18	Convergys	SYNNEX	50%	50%	\$2,425	\$2,519	0.9x	1.0x	1.0x	9.0x	7.6x	7.4x
06/28/18	RO Innovation	Upland Software	-	-	-	\$14	-	-	-	-	-	-
06/25/18	Accucode (Velocity Mail assets)	Descartes Systems	100%	-	-	\$26	-	-	-	-	-	-
06/25/18	Edgewater Networks	Ribbon Communications	73%	27%	-	\$110	1.7x	-	-	33.3x	-	-
06/25/18	Qwizdom	Boxlight	-	100%	-	\$3	-	-	-	-	-	-
06/21/18	Simility	PayPal	100%	-	-	\$120	-	-	-	-	-	-
06/18/18	Zunos	Bigtincan	100%	-	-	\$2	-	-	-	-	-	-
06/12/18	FacilitySource	CBRE Group	100%	-	-	\$290	-	-	-	-	-	-
06/11/18	Adaptive Insights	Workday	-	100%	\$1,550	\$1,556	13.6x	-	-	nm	-	-
06/11/18	VictorOps	Splunk	-	100%	-	\$120	-	-	-	-	-	-
06/04/18	Bradford Networks	Fortinet	-	100%	-	\$17	-	-	-	-	-	-
06/04/18	GitHub	Microsoft	-	100%	-	\$7,500	-	-	-	-	-	-
05/30/18	Dealflo	OneSpan	100%	-	-	\$55	-	-	-	-	-	-
05/29/18	BMC Software	Kohlberg Kravis Roberts & Co.	100%	-	-	\$8,400	-	-	-	-	-	-
05/28/18	Raet	Visma	-	100%	-	\$35	-	-	-	-	-	-
05/28/18	WEBPRO	ZetaDisplay	100%	-	-	\$3	0.9x	-	-	-	-	-
05/24/18	NCC Group (software testing business)	Marlin Equity Partners	100%	-	-	\$5	-	-	-	-	-	-
05/23/18	A2iA	Mitek Systems	57%	43%	-	\$50	3.2x	-	-	-	-	-
05/22/18	Solar Security	Rostelecom	-	100%	-	\$24	-	-	-	-	-	-
05/21/18	Ipreo	IHS Markit	-	100%	-	\$1,855	6.4x	-	-	-	-	-
05/21/18	PowerPlan	Roper Technologies	100%	-	-	\$1,100	-	-	-	-	-	-
05/10/18	SiteHelix	O.co	12%	88%	-	\$4	-	-	-	-	-	-
05/08/18	Oscar Software Group	Panostaja	-	100%	-	\$11	1.3x	-	-	-	-	-
05/01/18	Accompany	Cisco Systems	100%	-	-	\$270	-	-	-	-	-	-
05/01/18	Mandata	LDC	-	100%	-	\$28	-	-	-	-	-	-
04/26/18	Mattersight	NICE	100%	-	\$103	\$114	2.5x	2.2x	2.1x	nm	nm	36.6x
04/26/18	Weebly	Square	50%	50%	-	\$265	-	-	-	-	-	-
04/24/18	PeopleFluent	Learning Technologies Group	100%	-	-	\$150	1.4x	-	-	-	-	-
04/23/18	Viewpoint	Trimble	100%	-	-	\$1,200	-	-	-	-	-	-
04/20/18	ClickPay	RealPage	65%	35%	-	\$219	-	9.9x	6.8x	-	-	-
04/18/18	Enreach Solutions	Cxense	-	100%	\$1	\$2	1.8x	-	-	nm	-	-
04/12/18	Actian Corp	HCL Technologies	100%	-	-	\$330	-	-	-	-	-	-
04/04/18	Cherwell Software	Kohlberg Kravis Roberts & Co.	-	100%	-	\$172	-	-	-	-	-	-
04/04/18	GeoLang	Shearwater Group	-	100%	\$2	\$3	-	-	-	-	-	-

Includes only transactions for which data was publicly available. Sources: Company releases, Wall Street research

Note: EV / Revenue multiples greater than 20x and EV / EBITDA multiples greater than 50x are considered to be not meaningful

M&A Activity

Publicly Available Software M&A Transaction Data: 2Q 2018 continued

(\$ millions)

Announced	Target	Acquirer(s)	Consideration		Equity	Enterprise	EV / Revenue			EV / EBITDA		
			% Cash	% Stock	Value	Value	LTM	Current yr	Fwd yr	LTM	Current yr	Fwd yr
04/03/18	Erado	Zix	100%	-	-	\$15	5.0x	-	-	-	-	-
04/02/18	GE Healthcare (Healthcare IT assets)	Veritas Capital	100%	-	-	\$1,050	-	-	-	-	-	-
04/02/18	Wells Fargo (HR assets)	Asure Software	96%	4%	-	\$10	-	-	-	-	-	-

Includes only transactions for which data was publicly available. Sources: Company releases, Wall Street research

Note: EV / Revenue multiples greater than 20x and EV / EBITDA multiples greater than 50x are considered to be not meaningful

M&A Activity

Announced Software Acquisitions: 2Q 2018

(\$ millions)

Announced	Target	Acquirer(s)	Target Segment & Description	Price
06/29/18	Metalogix	Quest Software	Storage Management - Data migration and archiving	n/a
06/28/18	Convergys	SYNNEX	ERP & Business Applications - Customer management services	\$2,519
06/28/18	RO Innovation	Upland Software	Marketing Applications - Customer reference management and sales enablement	\$14
06/27/18	Every Angle Software	Magnitude Software	Business Intelligence - Governed data discovery and self-serve analytics	n/a
06/27/18	KnowledgeLake	Ron Cameron	Content Management - Document capture, retrieval and workflow management	n/a
06/26/18	Chute	ESW Capital	Content Management - Social media content management, location tracking and image recognition	n/a
06/26/18	Elastic Beam	Ping Identity	IT Security - API security monitoring and analytics	n/a
06/26/18	Zemax	EQT	ERP & Business Applications - Optomechanical design & simulation	n/a
06/25/18	Qwizdom	Boxlight	ERP & Business Applications - Employee training and audience response	\$3
06/25/18	Intel (Lustre File System business)	DataDirect Networks	Content Management - Parallel cluster computing and file management	n/a
06/25/18	Accucode (Velocity Mail assets)	Descartes Systems	ERP & Business Applications - Mail and parcel shipment scanning and tracking	\$26
06/25/18	Edgewater Networks	Ribbon Communications	Network Infrastructure - IP-based voice, video and data	\$110
06/23/18	Pierbridge	WiseTech	ERP & Business Applications - Parcel shipping transportation management and analytics	n/a
06/21/18	Critiquet	2U	ERP & Business Applications - Focused peer review and document annotation	n/a
06/21/18	Centriq Group	Korber	ERP & Business Applications - Enterprise supply chain and workforce management	n/a
06/21/18	Simility	PayPal	IT Security - Fraud prevention and risk management	\$120
06/21/18	Shape Analytics	Reflektive	ERP & Business Applications - Workforce analytics	n/a
06/21/18	Smyte	Twitter	IT Security - Online fraud prevention, antispam and reputation management	n/a
06/20/18	Synchro Software	Bentley Systems	ERP & Business Applications - Construction project management and collaboration	n/a
06/20/18	Pathgather	Degreed	ERP & Business Applications - Corporate continuing education	n/a
06/20/18	Bonsai AI	Microsoft	Business Intelligence - Automated model management and collaboration	n/a
06/20/18	MyAlerts	Think3	Marketing Applications - Ecommerce marketing automation	n/a
06/20/18	QASymphony	Tricentis	ERP & Business Applications - Enterprise software testing and reporting	n/a
06/20/18	DeepUI	WalkMe	Platforms, Development Tools & Deployment - Graphical user interface analysis	n/a
06/19/18	July Systems	Cisco Systems	Marketing Applications - Mobile experience and customer location analytics	n/a
06/19/18	Froala	IDERA	ERP & Business Applications - HTML-based Web editing application	n/a
06/19/18	TranslateNow	TransPerfect Translations	Communications - Document language translation	n/a
06/18/18	Zunos	Bigtincan	ERP & Business Applications - Employee training and performance management	\$2
06/18/18	Transaction Pro	Right Networks	Financial Applications - QuickBooks data import and export	n/a
06/15/18	Oniqua	IBM	ERP & Business Applications - Maintenance, repair and operations inventory optimization	n/a
06/14/18	HRnext (software IP assets)	Asure Software	ERP & Business Applications - HR information management	n/a
06/14/18	Centric Software	Dassault Systemes	ERP & Business Applications - Product lifecycle management and collaboration	n/a
06/14/18	Global Software	TA Associates	ERP & Business Applications - Excel-based spreadsheet automation and reporting	n/a
06/14/18	insightssoftware.com	TA Associates	ERP & Business Applications - ERP reporting and enterprise resource management	n/a
06/13/18	Empirical Systems	Tableau Software	Business Intelligence - AI assisted embedded analytics	n/a
06/13/18	Virtuosys	Veaa	Platforms, Development Tools & Deployment - Mobile/multi access IoT edge computing	n/a
06/13/18	Mi3 Security	Zimperium	IT Security - Mobile device security application and analysis	n/a
06/12/18	Artemis International Solutions	Aurea	ERP & Business Applications - Project management and collaboration	n/a
06/12/18	FacilitySource	CBRE Group	ERP & Business Applications - Retail transaction management, billing, reporting and analytics	\$290
06/12/18	Everwin	Everwin	ERP & Business Applications - Engineering and construction sector focused billing, HR and project management	n/a
06/12/18	TrendMiner	Software AG	Business Intelligence - Machine learning visual data analytics	n/a
06/12/18	BriteVerify	Validity	IT Security - Email validation and verification	n/a
06/11/18	Scope eKnowledge Center	SPi Global	Content Management - Content enhancement, data management, research and analytics	n/a
06/11/18	VictorOps	Splunk	Platforms, Development Tools & Deployment - DevOps incident management, documentation and collaboration	\$120
06/11/18	Adaptive Insights	Workday	ERP & Business Applications - Financial and human resources planning, analysis and reporting	\$1,556
06/08/18	Savvius	LiveAction	IT Security - Forensic analysis, network security, wireless analysis and troubleshooting	n/a
06/08/18	Rallyteam	Workday	ERP & Business Applications - Workforce talent management	n/a
06/07/18	ConceptShare	Deltek	Marketing Applications - Marketing operations management and collaboration	n/a
06/07/18	SolusLabs	Plesk	Network Infrastructure - Virtual private server management	n/a
06/07/18	Reflect Technologies	Puppet Labs	Business Intelligence - Data visualizations, analytics, and BI reporting	n/a

Sources: Company releases, Wall Street research

M&A Activity

Announced Software Acquisitions: 2Q 2018 continued

(\$ millions)

Announced	Target	Acquirer(s)	Target Segment & Description	Price
06/06/18	Maintenance Connection	Accruent	ERP & Business Applications - Enterprise maintenance management	n/a
06/06/18	WorkXO	QuestionPro	ERP & Business Applications - Employee behavior reporting and analytics	n/a
06/06/18	Filelock	Reason Software	IT Security - Consumer data encryption	n/a
06/06/18	Scribe Software	TIBCO Software	ERP & Business Applications - CRM and ERP data integration and cloud migration	n/a
06/05/18	Customer Insight	Constellation HomeBuilder Systems	ERP & Business Applications - Customer analytics, marketing and service automation	n/a
06/05/18	Silver Lining Cloud Consulting	Druva Software	Storage Management - Enterprise backup and disaster recovery	n/a
06/05/18	MediaPRO	Frontier Capital	IT Security - Phishing, threat management and cybersecurity training	n/a
06/05/18	Coresystems	SAP	ERP & Business Applications - Field service and mobile workforce management	n/a
06/05/18	LearnCore	Showpad	ERP & Business Applications - Sales corporate training and video coaching	n/a
06/05/18	GFB EDV	Tricentis	Platforms, Development Tools & Deployment - Test data management	n/a
06/05/18	Navetti	Vendavo	Financial Applications - Pricing, cost management, consulting and analytics	n/a
06/04/18	EMS Software	Accruent	ERP & Business Applications - Event scheduling and management	n/a
06/04/18	Bradford Networks	Fortinet	IT Security - Network access control, threat response and endpoint security	\$17
06/04/18	GitHub	Microsoft	ERP & Business Applications - Project management, collaboration and code hosting	\$7,500
06/04/18	Livingstone Technologies	The Carlyle Group	Financial Applications - Software asset management, licensing and managed services	n/a
06/01/18	Progressly	Box	ERP & Business Applications - Business process and data warehouse management	n/a
05/31/18	Packet Design	Ciena	Network Infrastructure - Network traffic and IP routing analytics	n/a
05/31/18	LogRhythm	Thoma Bravo	IT Security - Security information and event management	n/a
05/30/18	Dealflo	OneSpan	ERP & Business Applications - Customer onboarding, contract management, identity verification and automation	\$55
05/30/18	RobustWealth	Principal Financial Services	Financial Applications - Wealth management, billing and document management	n/a
05/30/18	Bizness Apps	Think3	Platforms, Development Tools & Deployment - Mobile application development and reseller services	n/a
05/29/18	VisionWare	Civica Group	Content Management - Master data management and integration	n/a
05/29/18	Lumeta	FireMon	Network Infrastructure - Device-automated detection, mapping and real time analysis	n/a
05/29/18	Sumerian Europe	ITRS Group	ERP & Business Applications - Predictive capacity management, data analytics and service management	n/a
05/29/18	BMC Software	Kohlberg Kravis Roberts & Co.	Platforms, Development Tools & Deployment - Application, systems and database management	\$8,400
05/28/18	Raet	Visma	ERP & Business Applications - HR, payroll and benefit management	\$35
05/28/18	WEBPRO	ZetaDisplay	Communications - Graphic display, presentation and communication	\$3
05/24/18	NCC Group (software testing business)	Marlin Equity Partners	Platforms, Development Tools & Deployment - Enterprise software testing	\$5
05/24/18	CEMAR UK	think project!	ERP & Business Applications - Construction contract management	n/a
05/23/18	RIA in a Box	Aquiline Capital Partners	Financial Applications - Investment adviser registration compliance and operations management	n/a
05/23/18	AwareManager	Building Engines	ERP & Business Applications - Facility management system	n/a
05/23/18	Prologic Technology Systems	Frontline Technologies Group	Content Management - Situational awareness and social data analysis	n/a
05/23/18	A2iA	Mitek Systems	Business Intelligence - Image analysis and word recognition	\$50
05/23/18	Swiftpage ACT!	SFW Capital Partners	Marketing Applications - Situational awareness and social data analysis	n/a
05/23/18	Destiny Solutions	The Riverside Company	ERP & Business Applications - Student lifecycle management	n/a
05/22/18	Virgin Pulse	Marlin Equity Partners	ERP & Business Applications - Employee health and well being	n/a
05/22/18	Solar Security	Rostelecom	IT Security - Enterprise security management and monitoring	\$24
05/21/18	Haystax Technology	Fishtech Group	Business Intelligence - Situational awareness and social data analysis	n/a
05/21/18	Ipreo	IHS Markit	Financial Applications - Securities issuance and document management	\$1,855
05/21/18	PowerPlan	Roper Technologies	ERP & Business Applications - Asset accounting, budgeting and forecasting ERP and analytics	\$1,100
05/21/18	Townsend Security	Syncsort	IT Security - Data encryption, authentication and privacy	n/a
05/18/18	iovation	TransUnion	IT Security - Fraud prevention and customer data management	n/a
05/17/18	J2 Innovations	Siemens	Platforms, Development Tools & Deployment - IoT building automation programming and visualization	n/a
05/17/18	Stanton Allen	Wilson Legal Solutions	ERP & Business Applications - Customer relationship management and business development	n/a
05/16/18	Intellectual Property Associates	Castik Capital	ERP & Business Applications - Intellectual property management and outsourcing	n/a
05/16/18	Aptaris Software	dunnhumby	Marketing Applications - Marketing, analytics and promotions management	n/a
05/16/18	Datascience	Oracle	Business Intelligence - Data science platform, predictive analytics and data modeling	n/a
05/16/18	PatentSight	Reed Technology	Business Intelligence - Strategic IP management analytics	n/a
05/16/18	Assurance Software	Resurgens Technology Partners	Storage Management - Disaster recovery, incident management and analytics	n/a
05/15/18	Mariana	8x8	ERP & Business Applications - Cloud phone, meeting, collaboration and contact center solutions	n/a

Sources: Company releases, Wall Street research

M&A Activity

Announced Software Acquisitions: 2Q 2018 continued

(\$ millions)

Announced	Target	Acquirer(s)	Target Segment & Description	Price
05/15/18	Plexxi	Hewlett Packard Enterprise	Network Infrastructure - Datacenter networking, configuration and visualization	n/a
05/14/18	Xynergy	Consumer51	Marketing Applications - Web design, social media management and marketing automation	n/a
05/14/18	Cask Data	Google	ERP & Business Applications - Data integration, application development and workflow management	n/a
05/14/18	Server Density	StackPath	Network Infrastructure - Website and server monitoring	n/a
05/11/18	TargetRecruit	Mountview Partners	ERP & Business Applications - Workforce tracking, payroll, reporting and automation	n/a
05/10/18	PlanetRisk	Everbridge	Business Intelligence - Big data risk assessment and analytics	n/a
05/10/18	MindX	HireVue	ERP & Business Applications - Hiring and talent analytics	n/a
05/10/18	PowerInbox (DynamicMail business)	Mobius Solutions	Financial Applications - Real time email content personalization	n/a
05/10/18	SiteHelix	O.co	Content Management - Customer analytics and website content optimization	\$4
05/09/18	Velostrata	Google	Content Management - On premise data migration	n/a
05/09/18	Hiptest	SmartBear Software	Platforms, Development Tools & Deployment - Testing and behavior automation	n/a
05/09/18	Winshuttle	Symphony Technology Group	Network Infrastructure - Robotic process automation	n/a
05/08/18	Oscar Software Group	Panostaja	ERP & Business Applications - Small business ERP and system integration	\$11
05/08/18	SAVO Group	Seismic Software	Marketing Applications - Sales enablement and effectiveness	n/a
05/07/18	Zmanda	Betsol	Storage Management - Data backup and recovery	n/a
05/07/18	SpaceTime Insight	Nokia	Business Intelligence - IoT focused data analytics	n/a
05/03/18	Brainware Solutions	Flexera Software	ERP & Business Applications - Enterprise asset and contract management	n/a
05/03/18	Armanta	IBM	Business Intelligence - Machine learning analytics and industrial IoT	n/a
05/03/18	TrustWeaver	Sovos Compliance	Content Management - Document and compliance management	n/a
05/02/18	Meta SaaS	Flexera Software	ERP & Business Applications - SaaS and vendor management	n/a
05/02/18	Justice Systems	Ontario Systems	ERP & Business Applications - Court case management	n/a
05/02/18	Programming Research	Perforce Software	Platforms, Development Tools & Deployment - Code analysis, testing and compliance assurance	n/a
05/01/18	Accompany	Cisco Systems	ERP & Business Applications - Contextual professional relationship intelligence	\$270
05/01/18	Difference	FirstCom Europe	Communications - Contact center, email and SMS management	n/a
05/01/18	Mandata	LDC	Storage Management - Asset tracking, invoice management and disaster recovery	\$28
05/01/18	Validity	Silversmith Capital Partners	Network Infrastructure - Data integrity, compliance and analysis	n/a
05/01/18	CRMFusion	Validity	ERP & Business Applications - Enterprise data quality	n/a
04/30/18	Vocado	Oracle	Financial Applications - Financial aid management SaaS	n/a
04/27/18	Inspiring Benefits	Aon	ERP & Business Applications - Employee benefit and loyalty program	n/a
04/26/18	Mattersight	NICE	ERP & Business Applications - Customer analytics	\$114
04/26/18	Weebly	Square	Marketing Applications - Website development and email marketing	\$265
04/25/18	VendorHawk	ServiceNow	ERP & Business Applications - Cloud software vendor and cost management	n/a
04/24/18	PeopleFluent	Learning Technologies Group	ERP & Business Applications - Workforce recruitment, training and performance management	\$150
04/24/18	Guardus Solutions	ZEISS Industrial Metrology	ERP & Business Applications - Production analysis and quality management	n/a
04/23/18	ThinkSmart	Mitratech	ERP & Business Applications - Business process and workflow automation	n/a
04/23/18	Viewpoint	Trimble	ERP & Business Applications - Construction project management, collaboration and content management	\$1,200
04/23/18	Allocate Software	Vista Equity Partners	ERP & Business Applications - Workforce management and optimization	n/a
04/23/18	Softcargo	WiseTech	ERP & Business Applications - Freight forwarding, warehousing and fleet management	n/a
04/23/18	Forward	WiseTech	ERP & Business Applications - Freight forwarding, accounting and logistics management	n/a
04/22/18	Profit Tools	Valsoft	ERP & Business Applications - Intermodal trucking and transportation management	n/a
04/20/18	FareHarbor	Booking	Financial Applications - Online booking and reservation management	n/a
04/20/18	ClickPay	RealPage	ERP & Business Applications - Real estate payment solutions	\$219
04/18/18	Enreach Solutions	Cxense	Business Intelligence - Audience segmentation and campaign reporting	\$2
04/18/18	Carerix	Pixid	ERP & Business Applications - Workforce recruitment and staffing	n/a
04/18/18	Wrappup	Rizio	ERP & Business Applications - Business meeting recording and note taking	n/a
04/18/18	Socrata	Tyler Technologies	Business Intelligence - Public sector data integration, visualization and reporting solutions	\$150
04/17/18	Tax Guard	Falfurrias Capital Partners	Financial Applications - Federal tax reporting and management	n/a
04/17/18	Info Salons	Freeman	ERP & Business Applications - Enterprise event management	n/a
04/17/18	Spirion	The Riverside Company	Content Management - Data discovery and risk management	n/a
04/17/18	LogicMonitor	Vista Equity Partners	Network Infrastructure - IT infrastructure performance monitoring	n/a

Sources: Company releases, Wall Street research

M&A Activity

Announced Software Acquisitions: 2Q 2018 continued

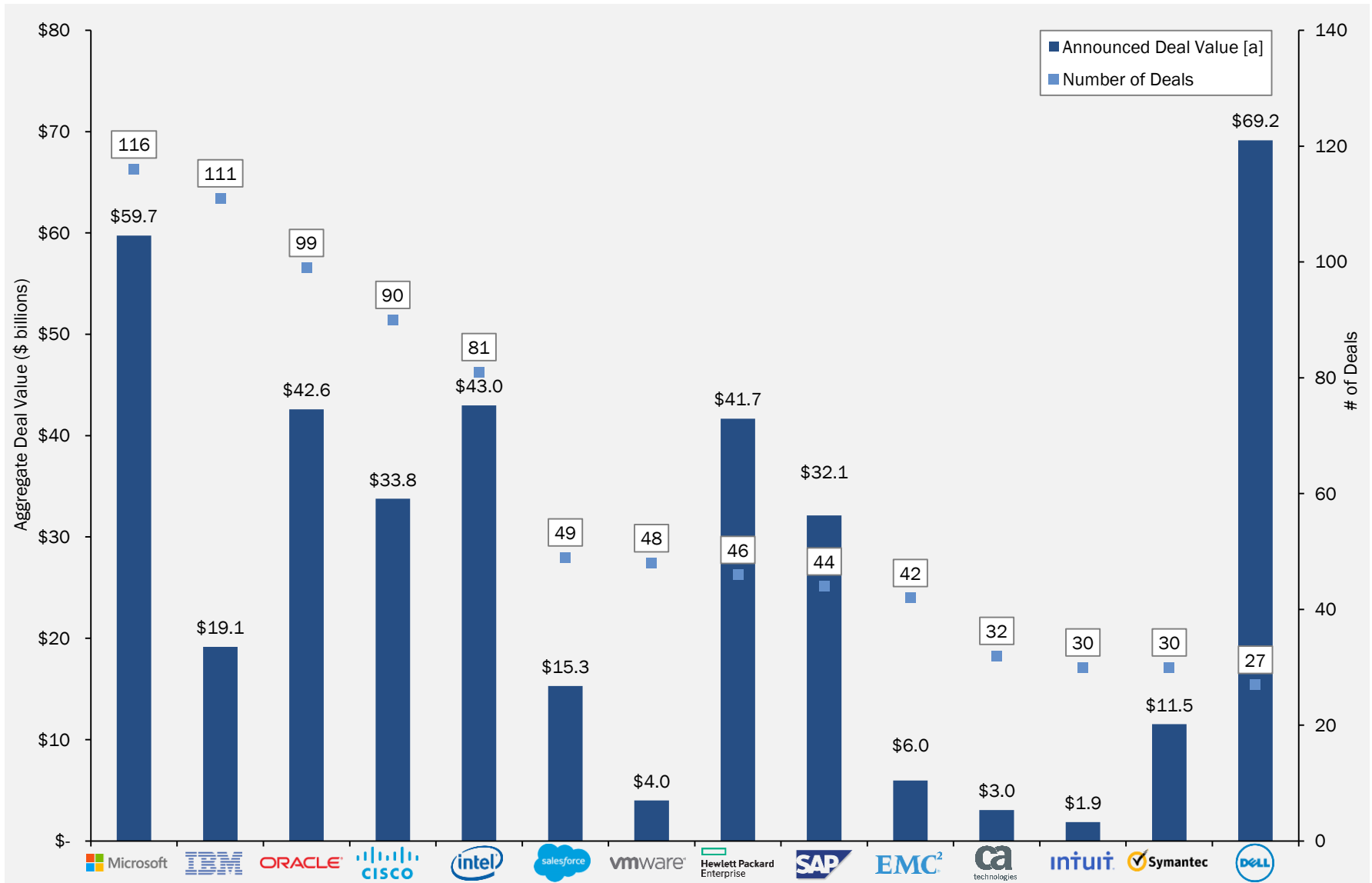
(\$ millions)

Announced	Target	Acquirer(s)	Target Segment & Description	Price
04/16/18	Leviathan Analytics	Frontier Data	Business Intelligence - Location based-BI and market analytics	n/a
04/16/18	Asset Performance Technologies	Uptake Technologies	IT Security - Equipment failure identification and preventive maintenance	n/a
04/13/18	Firm58	ESW Capital	Financial Applications - Financial management and profitability analysis	n/a
04/12/18	a la mode technologies	CoreLogic	Financial Applications - Mortgage appraisal data management	n/a
04/12/18	Agreement Express	Frontier Capital	ERP & Business Applications - Financial client onboarding and workflow automation	n/a
04/12/18	Actian Corp	HCL Technologies	Business Intelligence - Analytics and business process automation	\$330
04/12/18	Sysomos	Meltwater Group	Business Intelligence - Social media conversation monitoring and market intelligence	n/a
04/12/18	Delighted	Qualtrics	ERP & Business Applications - Enterprise customer analytics	n/a
04/11/18	ZenIQ	6sense Insights	Marketing Applications - Account-based marketing and sales automation	n/a
04/11/18	Kronos Technologies	EquiSoft	Financial Applications - Financial and insurance client management and analytics	n/a
04/11/18	Webbyog	IDERA	Platforms, Development Tools & Deployment - Database management and monitoring	n/a
04/11/18	LIAS Software	Inergy Analytical	ERP & Business Applications - Corporate performance management, budgeting and collaboration	n/a
04/11/18	Excentus	Professional Datasolutions	Marketing Applications - Customer loyalty-based marketing	n/a
04/10/18	TotalDiscovery	Catalyst Repository Systems	Content Management - E-discovery, document management and process automation	n/a
04/10/18	Asterion	Exela Technologies	Content Management - Document management and business process outsourcing	n/a
04/10/18	Secdo	Palo Alto Networks	IT Security - Endpoint security, threat alerts and event management	n/a
04/10/18	Keystyle Data Solutions	Viewpoint	ERP & Business Applications - Payroll, consulting and workforce management	n/a
04/09/18	SourceClear	CA Technologies	IT Security - Software composition analysis and vulnerability detection	n/a
04/09/18	PlanSwift Software	ConstructConnect	ERP & Business Applications - Construction project cost estimation	n/a
04/09/18	Insight Group Technologies	Mantis Informatics	ERP & Business Applications - Logistics and warehouse management	n/a
04/09/18	PP7 Affarsystem	Vitec Software	ERP & Business Applications - Construction project management	n/a
04/05/18	Information Technology Works	Cayuse	ERP & Business Applications - Education and research grant management	n/a
04/05/18	ImageTag	enChoice	ERP & Business Applications - Enterprise document management, sales automation and employee management	n/a
04/05/18	Mobilethink	Enghouse Systems	IT Operations Management - Device management, customer engagement and smartphone support	n/a
04/05/18	Fortscale Security	RSA Security	IT Security - Threat discovery, event management and behavior analytics	n/a
04/04/18	Insurance Technologies	Accel-KKR	Financial Applications - Insurance and financial services sales and regulatory automation	n/a
04/04/18	Edge Testing Solutions	Eurofins Digital Testing	Platforms, Development Tools & Deployment - Software testing and IT consulting	n/a
04/04/18	Reelio	Fullscreen	Marketing Applications - Social media marketing automation	n/a
04/04/18	Cherwell Software	Kohlberg Kravis Roberts & Co.	Network Infrastructure - Asset and IT service management	\$172
04/04/18	Hysminai	Lime	Marketing Applications - Sales performance management and collaboration	n/a
04/04/18	GeoLang	Shearwater Group	IT Security - Data loss protection, authorization and access control	\$3
04/04/18	Wind River	TPG Capital	Network Infrastructure - Device software optimization, operating systems and middleware	n/a
04/03/18	Noble Technologies	Adaptive	IT Operations Management - Product lifecycle management and systems integration	n/a
04/03/18	Bunchball	BI WORLDWIDE	ERP & Business Applications - Employee management and customer retention	n/a
04/03/18	Bongar	Francisco Partners	IT Security - Remote support and secure access	n/a
04/03/18	Erado	Zix	IT Security - E-discovery, supervision, security and analytics	\$15
04/02/18	Wells Fargo (HR assets)	Asure Software	ERP & Business Applications - Payroll processing and workforce management	\$10
04/02/18	Forerunner Software (BI reporting software assets)	Microsoft	Business Intelligence - Reporting and data integration	n/a
04/02/18	FourV Systems	OPAQ Networks	IT Security - Cyber security BI, reporting and analytics	n/a
04/02/18	1Mobility	Qualys	Content Management - Mobile device, email and web management	\$3
04/02/18	GE Healthcare (Healthcare IT assets)	Veritas Capital	ERP & Business Applications - Enterprise financial management and ambulatory care and workforce management	\$1,050

Sources: Company releases, Wall Street research

M&A Activity

Most Active Software Acquirers: 2007 – 2Q 2018



[a] Includes only transactions for which data was publicly available

M&A Activity

Most Active Software Acquirers

2007 – 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value	Announced	Target	Consideration		Equity Value	Enterprise Value	CA
		% Cash	% Stock					% Cash	% Stock			
CA Technologies						Cisco Systems (continued)						
Known acquired value (since 2007):						Known acquired value (since 2007):						
					\$3,044							
04/09/18	SourceClear	-	-	-	-	05/04/17	Saggezza (assets)	-	-	-	-	Cisco
09/28/17	Runscope	-	-	-	-	05/01/17	Viptela	100%	-	-	\$610	
06/15/17	zIT Consulting	-	-	-	-	01/24/17	AppDynamics	-	-	\$3,700	\$3,593	
03/07/17	Veracode	100%	-	-	\$614	10/17/16	Heroik Labs	-	-	-	-	Dell
12/28/16	Mobile System 7	-	-	-	-	08/30/16	ContainerX	-	-	-	-	
12/01/16	Automic Software	-	-	-	\$636	06/28/16	CloudLock	-	-	-	\$293	
09/20/16	BlazeMeter	100%	-	-	-	03/08/16	Synata	-	-	-	-	
08/04/15	Xceedium	-	-	-	-	03/02/16	Leaba Semiconductor	100%	-	-	\$320	EMC
06/08/15	IdMlogic	-	-	-	-	03/01/16	CliQr Technologies	100%	-	-	\$260	
06/04/15	Grid Tools	-	-	-	-	02/03/16	Jasper Technologies	-	-	-	\$1,400	
05/27/15	Rally Software	100%	-	-	\$480	11/20/15	Acano	100%	-	-	\$700	HP
10/28/14	Identropy (SCUID assets)	-	-	-	-	10/28/15	1 Mainstream	-	-	-	-	
04/22/13	Layer 7 Technologies	100%	-	-	\$155	10/27/15	Lancope	100%	-	-	\$453	
03/24/13	Nolio	100%	-	-	\$42	10/26/15	ParStream	-	-	-	-	IBM
09/10/12	Paragon Global Technology	-	-	-	-	10/13/15	Pawaa Software	-	-	-	-	
07/29/11	Watchmouse BV	-	-	-	-	09/30/15	Portcullis Computer Security	-	-	-	-	
06/29/11	Interactive TKO	100%	-	-	\$330	07/07/15	MaintenanceNet	-	-	-	\$139	
05/16/11	SE-Consulting GmbH	-	-	-	-	06/30/15	OpenDNS	100%	-	-	\$635	Intel
04/06/11	Base Technologies	-	-	-	-	06/03/15	Piston Cloud Computing	-	-	-	-	
01/25/11	Torokina Networks	-	-	-	-	05/07/15	Tropo	-	-	-	-	
09/28/10	Hyperformix	-	-	-	-	04/01/15	Embrane	-	-	-	-	
08/30/10	Arcot Systems	100%	-	-	\$200	12/10/14	Neohapsis	-	-	-	-	Intuit
08/12/10	4Base Technology	-	-	-	-	09/18/14	Memoir Systems	-	-	-	-	
03/10/10	Nimsoft	100%	-	-	\$350	09/17/14	Metacloud	-	-	-	\$149	
02/24/10	3Tera	-	-	-	-	06/27/14	Assemblage	-	-	-	-	Microsoft
01/11/10	Oblicore	100%	-	-	\$20	06/17/14	Tail-f Systems	-	-	-	\$175	
09/14/09	NetQoS	100%	-	\$200	\$200	05/21/14	ThreatGRID	-	-	-	-	
06/02/09	Cassatt	-	-	-	-	12/17/13	Kibits	-	-	-	-	Oracle
01/05/09	Orchestra	-	-	-	-	09/10/13	Whiptail Technologies	100%	-	-	\$415	
11/13/08	Eurekify	-	-	-	\$17	07/23/13	Sourcefire	100%	-	\$2,700	\$2,494	
10/15/08	Optinuity	-	-	-	-	06/20/13	Composite Software	100%	-	-	\$180	
10/07/08	IDFocus	-	-	-	-	05/29/13	JouleX	100%	-	-	\$107	Salesforce
Cisco Systems						Cisco Systems						
Known acquired value (since 2007):						Known acquired value (since 2007):						
					\$33,770							
06/19/18	July Systems	-	-	-	-	04/03/13	Ubiquisys	-	-	-	\$310	
05/01/18	Accompany	100%	-	-	\$270	03/25/13	SolveDirect Service Management	-	-	\$21	\$21	
01/24/18	Skyport Systems	-	-	-	-	01/29/13	Cognitive Security sro	-	-	-	-	SAP
12/07/17	47Line Technologies	-	-	-	-	01/23/13	Intucell	100%	-	\$475	\$475	
10/23/17	BroadSoft	-	\$1,737	\$1,900	-	12/18/12	BroadHop	-	-	-	-	
10/19/17	Perspica	-	-	-	-	11/29/12	Cariden Technologies	100%	-	\$141	\$141	
08/21/17	Springpath	100%	-	-	\$320	11/18/12	Meraki	100%	-	\$1,200	\$1,200	Symantec
07/13/17	Observable Networks	-	-	-	-	11/15/12	Cloupia	100%	-	\$125	\$125	
05/11/17	MindMeld	-	-	-	\$125	10/04/12	vCider	-	-	-	-	VMware
						07/13/12	Virtuata	-	-	-	-	
						05/03/12	Truviso	-	-	-	-	

continued

Note: "Known acquired value" includes only transactions for which data was publicly available

M&A Activity

Most Active Software Acquirers continued

2007 - 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value	Announced	Target	Consideration		Equity Value	Enterprise Value		
		% Cash	% Stock					% Cash	% Stock				
Cisco Systems (continued)						Dell (continued)						CA	
03/28/12	ClearAccess	-	-	-	-	12/18/12	Credant Technologies	-	-	-	-	Cisco	
03/15/12	NDS Group Ltd.	-	-	\$3,896	\$5,000	11/16/12	Gale Technologies	-	-	-	-		
10/20/11	BNI Video	-	-	-	\$99	10/23/12	Kitenga	-	-	-	-		
08/29/11	Versly	-	-	-	-	06/25/12	Quest Software	100%	-	\$2,383	\$2,408	Dell	
03/29/11	newScale	-	-	-	-	04/05/12	MAKE Technologies	-	-	-	-		
02/04/11	Inlet Technologies	100%	-	-	\$95	04/03/12	Clarity Solutions	-	-	-	-		
01/26/11	Pari Networks	-	-	-	-	04/02/12	Wyse Technology	-	-	-	-		
12/01/10	LineSider Technologies	-	-	-	-	03/13/12	SonicWALL	-	-	-	\$1,250	EMC	
09/02/10	Arch Rock Corporation	-	-	-	-	02/24/12	AppAssure	-	-	-	-		
08/26/10	ExtendMedia	-	-	-	-	06/20/11	RNA Networks	-	-	-	-		
05/20/10	CoreOptics	100%	-	-	\$99	01/04/11	SecureWorks	-	-	-	-	HP	
05/18/10	MOTO Development Group	-	-	-	-	12/22/10	InSite One	-	-	-	-		
01/05/10	Rohati Systems	-	-	-	-	12/13/10	Compellent Technologies	100%	-	\$960	\$820	IBM	
11/02/09	DVN Holdings (set-top box business)	-	-	-	\$45	11/02/10	Boomi	-	-	-	-		
10/27/09	ScanSafe	100%	-	-	\$183	07/19/10	Ocarina Networks	-	-	-	-		
10/13/09	Starent Networks	100%	-	\$2,900	\$2,510	07/01/10	Scalent	-	-	-	-		
10/01/09	Tandberg	100%	-	\$3,400	\$3,400	02/11/10	KACE Networks	100%	-	-	-		
04/09/09	Tidal Software	100%	-	-	\$105	02/12/08	MessageOne	100%	-	-	\$155	Intel	
03/19/09	Pure Digital Technologies	-	-	-	\$590	02/08/08	Exanet	-	-	-	-		
01/27/09	Richards-Zeta Building Intelligence	-	-	-	-	11/15/07	Everdream	-	-	-	-		
09/19/08	Jabber	-	-	-	-	11/05/07	EqualLogic	100%	-	\$1,418	\$1,400	Intuit	
08/27/08	PostPath	-	-	-	\$215	08/06/07	Zing Systems	-	-	-	-		
07/23/08	Pure Networks	100%	-	-	\$120	08/02/07	ASAP Software	-	-	-	\$340		
06/10/08	DiviTech A/S	-	-	-	-	07/18/07	SilverBack Technologies	-	-	-	-		
11/01/07	Securent	-	-	-	-							Microsoft	
10/23/07	Navini Networks	-	-	-	\$330	EMC Known acquired value (since 2007):				\$5,954			
09/27/07	Latigent	-	-	-	-	05/26/15	Virtustream	100%	-	-	\$1,200		
09/18/07	Cognio	-	-	-	-	04/16/15	Cloudlink Technologies	-	-	-	-	Oracle	
07/23/07	GlooLabs	-	-	-	-	10/28/14	Maginatics	-	-	-	-		
05/21/07	BroadWare Technologies	-	-	-	-	10/28/14	Spanning Cloud Apps	-	-	-	-		
03/28/07	SpansLogic	-	-	-	-	10/13/14	Cloudscaling	-	-	-	-		
03/15/07	WebEx	100%	-	\$3,200	\$3,145	07/08/14	Symplified (IP assets)	-	-	-	-	Salesforce	
03/13/07	NeoPath Networks	-	-	-	\$60	07/08/14	TwinStrata	-	-	-	-		
03/05/07	Utah Street Networks (assets)	-	-	-	-	05/05/14	DSSD	-	-	-	-		
02/26/07	Qovia	-	-	-	-	07/25/13	PassBan	-	-	-	-	SAP	
02/21/07	Reactivity	100%	-	-	\$135	07/11/13	ScaleIO	100%	-	-	-		
02/09/07	Five Across	-	-	-	-	07/08/13	Aveksa	-	-	-	-		
01/04/07	IronPort Systems	-	-	-	\$830	05/21/13	Adaptivity (assets)	-	-	-	-	Symantec	
Dell						Known acquired value (since 2007):						\$69,151	
10/12/15	EMC	73%	27%	\$63,100	\$62,778	11/29/12	MoreVRP	-	-	-	-		
03/24/14	StatSoft	-	-	-	-	10/30/12	Silver Tail Systems	-	-	-	-	VMware	
05/06/13	Enstratus	100%	-	-	-	05/31/12	Watch4Net Solutions	-	-	-	-		
						05/21/12	Syncplicity	-	-	-	-		

continued

Note: "Known acquired value" includes only transactions for which data was publicly available

M&A Activity

Most Active Software Acquirers continued

2007 - 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value	Announced	Target	Consideration		Equity Value	Enterprise Value	
		% Cash	% Stock					% Cash	% Stock			
EMC (continued)						HP (continued)						CA
05/10/12	XtremIO	-	-	-	-	03/04/14	Shunra Software (assets)	-	-	-	-	Cisco
03/20/12	Likewise Software	-	-	-	-	12/03/12	Digital Risk	100%	-	\$175	\$175	
10/03/11	Zettapoint	-	-	-	-	12/06/11	Hiflex Software GmbH	-	-	-	-	Dell
04/04/11	NetWitness	-	-	-	-	08/18/11	Autonomy	100%	-	\$11,560	\$10,889	
11/15/10	Isilon	100%	-	\$2,434	\$2,250	05/24/11	Printelligent	-	-	-	-	
07/06/10	Greenplum	100%	-	-	-	02/14/11	Vertica	-	-	-	-	
01/04/10	Archer Technologies	-	-	-	-	09/13/10	ArcSight	100%	-	\$1,651	\$1,500	EMC
09/01/09	Kazeon Systems	-	-	-	-	08/26/10	Stratavia	-	-	-	-	
08/31/09	FastScale Technology	-	-	-	-	08/23/10	3PAR	100%	-	\$2,400	\$2,296	
06/01/09	Data Domain	100%	-	\$2,378	\$2,100	08/17/10	Fortify Software	-	-	-	-	
05/27/09	Configuresoft	-	-	-	\$87	06/10/10	Phoenix Technologies (HyperSpace assets)	100%	-	-	\$12	HP
01/02/09	SourceLabs	-	-	-	-	04/28/10	Palm	100%	-	\$1,400	\$1,199	
04/08/08	Iomega	100%	-	\$213	\$148	11/11/09	3Com	100%	-	\$3,131	\$2,705	
04/07/08	WysDM Software	-	-	-	-	07/17/09	IBRIX	-	-	-	-	IBM
04/01/08	Conchango plc	100%	-	-	\$84	06/22/09	Excelerate HRO	-	-	-	-	
03/10/08	Infra Corporation	-	-	-	-	10/01/08	LeftHand Networks	100%	-	-	\$360	
02/21/08	Pi	100%	-	-	-	08/11/08	Colubris Networks	-	-	-	-	
12/27/07	Document Sciences	100%	-	\$87	\$85	05/13/08	Electronic Data Systems	-	-	-	\$13,900	Intel
10/30/07	Voyence	-	-	-	-	03/31/08	Tower Software	-	-	-	\$100	
10/15/07	Illuminator	-	-	-	-	01/22/08	Exstream Software	-	-	-	\$720	
10/04/07	Berkeley Data Systems	-	-	-	-	12/10/07	NUR Macroprinters	100%	-	-	\$118	Intuit
08/30/07	BusinessEdge Solutions	-	-	-	-	11/12/07	EYP Mission Critical Facilities	-	-	-	-	
08/09/07	Tablus	-	-	-	-	10/22/07	AOME	-	-	-	-	
07/19/07	X-Hive Corporation	-	-	-	-	09/13/07	MacDermid ColorSpan	-	-	-	-	
06/04/07	Verid	-	-	-	-	07/23/07	Neoware	100%	-	\$328	\$206	Microsoft
						07/23/07	Opsware	100%	-	\$1,673	\$1,600	
						06/19/07	SPI Dynamics	-	-	-	\$135	
						03/22/07	Tabblo	-	-	-	-	Oracle
						02/26/07	PolyServe	-	-	-	-	
						02/05/07	Bristol Technology	-	-	-	-	
												Salesforce
						IBM Known acquired value (since 2007): \$19,146						
						06/15/18	Oniqua	-	-	-	-	
						05/03/18	Armanta	-	-	-	-	
						10/04/17	Vivant Digital	-	-	-	-	SAP
						09/14/17	Cloudigo	-	-	-	-	
						05/31/17	TIMETOACT GROUP	-	-	-	-	
						05/02/17	Verizon (assets)	-	-	-	-	Symantec
						01/23/17	Agile 3 Solutions	-	-	-	-	
						11/01/16	Fluid (assets)	-	-	-	-	
						10/27/16	Sanovi Technologies	-	-	-	-	
						06/01/16	EZ Legacy	-	-	-	-	VMware
						03/31/16	Bluewolf	-	-	-	\$240	

continued

Note: "Known acquired value" includes only transactions for which data was publicly available

M&A Activity

Most Active Software Acquirers continued

2007 - 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value	Announced	Target	Consideration		Equity Value	Enterprise Value	
		% Cash	% Stock					% Cash	% Stock			
IBM (continued)						IBM (continued)						CA
03/18/16	Optevia	-	-	-	-	04/25/12	Vivisimo	-	-	-	-	Cisco
02/29/16	Resilient Systems	-	-	-	-	04/13/12	Varicent Software	-	-	-	-	
02/18/16	Truven Health Analytics	100%	-	-	\$2,600	01/31/12	Worklight	-	-	-	-	Dell
02/03/16	Ecx International	-	-	-	-	01/04/12	Green Hat	-	-	-	-	
02/02/16	Aperto	-	-	-	-	12/15/11	Emptoris	-	-	-	-	
01/28/16	Resource/Ammirati	-	-	-	-	12/08/11	DemandTec	100%	-	\$504	\$439	EMC
01/21/16	Ustream	100%	-	-	\$130	12/05/11	Curam Software Ltd.	-	-	-	-	
01/15/16	IRIS Analytics	-	-	-	-	10/11/11	Platform Computing	-	-	-	-	HP
12/08/15	Clearleap	-	-	-	-	10/04/11	Q1 Labs	-	-	-	-	
11/03/15	Gravitant	100%	-	-	-	09/01/11	Algorithmics	-	-	-	\$387	
10/28/15	The Weather Company (assets)	-	-	-	-	08/31/11	i2	-	-	-	-	
10/05/15	Cleversafe	-	-	-	-	03/22/11	TRIRIGA	100%	-	-	\$108	
09/28/15	Meteorix	100%	-	-	\$120	10/21/10	Clarity Systems Ltd.	-	-	-	-	
09/24/15	Advanced Application	100%	-	-	\$13	10/14/10	PSS Systems	-	-	-	-	IBM
09/10/15	StrongLoop	-	-	-	-	09/27/10	BLADE Network Technologies	-	-	-	-	
08/17/15	Appcore (cloud automation assets)	-	-	-	-	09/20/10	Netezza	100%	-	\$1,836	\$1,700	
08/06/15	Merge Healthcare	100%	-	-	\$904	09/15/10	OpenPages	-	-	-	-	
07/23/15	Compose	-	-	-	-	08/13/10	Unica	100%	-	\$523	\$480	Intel
06/03/15	Blue Box Group	-	-	-	-	08/10/10	Datacap	-	-	-	-	
04/13/15	Phytel	-	-	-	-	07/29/10	Storwize	-	-	-	-	
04/13/15	Explorys	-	-	-	-	07/01/10	BigFix	-	-	-	-	
03/27/15	Blekkko (assets)	-	-	-	-	06/15/10	Coremetrics	-	-	-	-	Intuit
03/04/15	AlchemyAPI	-	-	-	-	05/24/10	Sterling Commerce	100%	-	-	\$1,400	
08/11/14	Lighthouse Security Group (assets)	-	-	-	-	05/03/10	Cast Iron Systems	100%	-	-	-	
07/31/14	CrossIdeas	-	-	-	-	02/16/10	Intelliden	-	-	-	-	Microsoft
05/20/14	Cognea	-	-	-	-	02/03/10	Initiate Systems	-	-	-	-	
04/10/14	Silverpop Systems	-	-	-	-	01/20/10	National Interest Security Company	-	-	-	-	
02/24/14	Cloudant	-	-	-	-	12/16/09	Lombardi	-	-	-	-	
12/19/13	Aspera	-	-	-	-	11/30/09	Guardium	-	-	-	\$225	Oracle
12/06/13	Associated Dexia Technology Services	-	-	-	-	10/05/09	Wilshire Credit Corporation	-	-	-	-	
11/13/13	Fiberlink Communications	100%	-	-	-	09/22/09	RedPill Solutions	-	-	-	-	Salesforce
10/03/13	Xtify	-	-	-	-	07/28/09	Ounce Labs	-	-	-	-	
10/01/13	The Now Factory	-	-	-	-	07/25/09	SPSS	100%	-	\$1,170	\$859	
09/19/13	Daeja Image Systems Ltd.	-	-	-	-	05/04/09	Exeros	100%	-	-	\$12	
08/15/13	Trusteer	-	-	-	-	01/15/09	Outblaze	-	-	-	\$8	SAP
07/09/13	CSL International	-	-	-	-	11/18/08	Transitive	-	-	-	-	
06/04/13	SoftLayer Technologies	100%	-	-	\$2,000	07/28/08	ILOG SA	100%	-	-	-	
04/22/13	UrbanCode	-	-	-	-	07/02/08	Platform Solutions	-	-	-	-	
02/01/13	Star Analytics	-	-	-	-	04/29/08	InfoDyne	-	-	-	-	Symantec
12/19/12	StoredIQ	-	-	-	-	04/18/08	Diligent Technologies	-	-	-	-	
09/24/12	Butterfly Software Ltd.	-	-	-	-	04/10/08	FilesX	-	-	-	\$50	VMware
08/27/12	Kenexa	100%	-	\$1,307	\$1,280	03/12/08	Encentuate	-	-	-	-	
05/02/12	Tealeaf Technology	-	-	-	-	01/23/08	AptSoft	-	-	-	-	

continued

Note: "Known acquired value" includes only transactions for which data was publicly available

M&A Activity

Most Active Software Acquirers continued

2007 - 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value	Announced	Target	Consideration		Equity Value	Enterprise Value	
		% Cash	% Stock					% Cash	% Stock			
IBM (continued)						Intel (continued)						CA
01/18/08	Net Integration Technologies	-	-	-	-	09/30/13	Sensory Networks	-	-	-	-	Cisco
01/02/08	XIV	-	-	-	\$325	09/13/13	Indisys	-	-	-	-	
12/21/07	Solid Information Technology	-	-	-	-	07/16/13	Omek Interactive	-	-	-	\$50	Dell
12/06/07	Arsenal Digital Solutions	-	-	-	-	05/29/13	ST-Ericsson (assets)	-	-	-	-	
11/12/07	Cognos	100%	-	\$5,000	\$4,960	05/06/13	Stonesoft Oyj	100%	-	\$389	\$378	
10/24/07	NovusCG	-	-	-	-	04/24/13	Aepona	-	-	-	-	
08/22/07	WebDialogs	-	-	-	-	04/17/13	Mashery	-	-	-	-	EMC
08/03/07	Princeton Softech	-	-	-	-	04/03/13	ProFUSION	-	-	-	-	
07/16/07	DataMirror	100%	-	\$179	\$161	02/26/13	LinuxWorks (ValidEdge technology)	-	-	-	-	
06/11/07	Telelogic	100%	-	\$745	\$745	02/22/13	appMobi (HTML5 developer tools division)	-	-	-	-	HP
06/06/07	Watchfire	-	-	-	-	11/28/12	Rocketbox Studios GmbH	-	-	-	-	
04/26/07	Serbian Business Systems (assets)	-	-	-	-	11/19/12	ZiiLABS	100%	-	\$30	\$30	
01/30/07	DM Information Systems	-	-	-	-	08/24/12	NEVEX	-	-	-	-	
01/29/07	Softek	-	-	-	-	07/13/12	Whamcloud	-	-	-	-	IBM
						07/02/12	IDesia Ltd.	-	-	-	-	
Intel				Known acquired value (since 2007):	\$42,993	04/24/12	Cray (assets)	-	-	\$140	\$140	
03/08/18	TunnelBear	[a]	-	-	-	01/26/12	RealNetworks (assets)	-	-	-	\$120	
11/27/17	Skyhigh Networks	[a]	-	-	-	01/23/12	Qlogic (InfiniBand assets)	100%	-	-	\$125	Intel
03/13/17	Mobileye	100%	-	\$14,700	\$15,300	10/04/11	NitroSecurity	-	-	-	-	
11/03/16	Voke	-	-	-	-	09/28/11	Telemap Ltd.	-	-	-	-	
09/05/16	Movius	-	-	-	-	09/14/11	CoFluent Design	-	-	-	-	Intuit
08/10/16	Nervana Systems	-	-	-	-	09/01/11	GraphTech	-	-	-	-	
05/26/16	Itseez	-	-	-	-	07/19/11	Fulcrum Microsystems	-	-	-	-	
04/05/16	Yogitech	-	-	-	-	05/25/11	SiPort Corporation	-	-	-	-	Microsoft
03/09/16	Replay Technologies	-	-	-	-	03/23/11	Sentrigo	-	-	-	\$35	
01/04/16	Ascending Technologies	-	-	-	-	03/14/11	SySDSoft	-	-	-	-	
10/26/15	Saffron Technology	-	-	-	-	02/14/11	Silicon Hive BV	-	-	-	-	
10/01/15	VIA Telecom (assets)	-	-	-	-	01/04/11	Nordic Edge AB	-	-	-	-	Oracle
08/24/15	Docea Power	-	-	-	-	12/02/10	InternetSafety.com	[a]	100%	\$11	\$10	
06/16/15	Recon Instruments	-	-	-	-	11/17/10	CognoVision	-	-	-	\$17	
06/01/15	Altera	100%	-	\$16,700	\$15,817	09/02/10	Neocelus	-	-	-	-	Salesforce
03/25/15	Lemoptix	-	-	-	-	08/30/10	Infineon Technologies AG (assets)	100%	-	-	\$1,400	
02/02/15	Lantiq	-	-	-	-	08/19/10	McAfee	100%	-	\$7,680	\$6,876	
01/20/15	Composyt Light Labs	-	-	-	-	08/16/10	Texas Instruments (assets)	-	-	-	-	
12/01/14	PasswordBox	-	-	-	-	07/29/10	tenCube	[a]	100%	\$11	\$10	SAP
09/10/14	Powerwave	-	-	-	-	05/25/10	Trust Digital	[a]	100%	\$33	\$32	
08/13/14	LSI	100%	-	-	\$650	05/24/10	Comsys Communications	-	-	-	\$30	
05/09/14	Ginger Software (assets)	-	-	-	-	02/05/10	Virtutech	-	-	-	-	Symantec
04/01/14	INSIDE Secure (assets)	100%	-	-	\$19	08/19/09	RapidMind	-	-	-	-	
03/04/14	BASIS Science	-	-	-	-	07/31/09	Cilk Arts	-	-	-	-	
12/16/13	Mindspeed Technologies (assets)	-	-	-	-	07/30/09	MX Logic	[a]	100%	\$138	\$163	
12/03/13	Hacker League (assets)	-	-	-	-	06/04/09	Wind River Systems	-	-	\$884	\$714	VMware
11/08/13	Kno	-	-	-	-	05/15/09	Solidcore Systems	[a]	100%	\$32	\$41	

[a] Acquired by McAfee prior to Intel acquisition; acquisitions completed by McAfee post April 2017 are also backed by Thoma Bravo and TPG Capital
 Note: "Known acquired value" includes only transactions for which data was publicly available

continued

M&A Activity

Most Active Software Acquirers continued

2007 - 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value	Announced	Target	Consideration		Equity Value	Enterprise Value	
		% Cash	% Stock					% Cash	% Stock			
Intel (continued)						Intuit (continued)						CA
05/12/09	Endeavor Security	[a]	100%	\$3	\$3	11/26/07	Homestead Technologies	100%	-	-	\$170	Cisco
02/16/09	Swiftfoot Graphics AB	-	-	-	-	Microsoft						Dell
10/15/08	NetEffect	-	-	-	\$8	Known acquired value (since 2007):						\$59,738
09/22/08	Secure Computing	[a]	100%	\$497	\$465	06/20/18	Bonsai AI	-	-	-	-	EMC
08/29/08	OpenedHand	-	-	-	-	06/04/18	GitHub	-	100%	-	\$7,500	
07/31/08	Reconnex	[a]	100%	\$40	\$45	04/02/18	Forerunner Software (BI reporting software asse	-	-	-	-	HP
05/19/08	WebVMC	-	-	-	-	02/13/18	Chalkup	-	-	-	-	IBM
02/25/08	Offset Software	-	-	-	-	01/29/18	PlayFab	100%	-	-	-	Intel
11/28/07	Neoptica	-	-	-	-	01/03/18	Avere Systems	-	-	-	-	Intuit
10/30/07	ScanAlert	[a]	100%	\$48	\$54	11/06/17	Swing Technologies (assets)	-	-	-	-	Microsoft
10/08/07	SafeBoot	[a]	100%	\$339	\$350	10/03/17	AltSpaceVR	-	-	-	-	Oracle
09/14/07	Havok	-	100%	-	\$110	08/15/17	Cycle Computing	-	-	-	-	Salesforce
Intuit						Known acquired value (since 2007):						\$1,854
12/05/17	TSheets	-	100%	-	\$340	06/29/17	Cloudyn	100%	-	\$55	\$55	SAP
10/26/17	Exactor	-	-	-	-	05/24/17	Hexadite	-	-	-	-	Symantec
10/10/16	MTS Global	-	-	-	-	04/18/17	Intentional Software	-	-	-	-	VMware
03/24/15	Playbook HR	-	-	-	-	04/10/17	Deis	-	-	-	-	
02/05/15	Porticor	-	-	-	-	01/17/17	Donya Labs	-	-	-	-	
01/21/15	ZeroPaper	-	-	-	-	01/13/17	Maluuba	-	-	-	-	
12/10/14	Acrede	-	-	-	-	11/08/16	Beam Interactive	-	-	-	-	
08/13/14	Itrios	-	-	-	-	08/22/16	Genee	-	-	-	-	
08/07/14	PaySuite	-	-	-	-	06/16/16	Wand Labs	-	-	-	-	
07/30/14	KDK Software	-	-	-	-	06/13/16	LinkedIn	100%	-	\$26,200	\$26,200	
05/27/14	Check	-	-	-	\$360	05/03/16	Solair	-	-	-	-	
05/14/14	Invitco	-	-	-	-	02/24/16	Xamarin	-	-	-	-	
05/08/14	Lettuce	-	-	-	-	02/09/16	Zikera (Groove assets)	-	-	-	-	
12/04/13	Docstoc	-	-	-	-	02/03/16	TouchType	-	-	-	-	
11/20/13	Prestwick Services	-	-	-	-	01/19/16	Teacher Gaming (assets)	-	-	-	-	
10/30/13	Full Slate	-	-	-	-	01/13/16	Event Zero (UC Commander assets)	-	-	-	-	
10/23/13	Level Up Analytics	-	-	-	-	12/21/15	Talko (assets)	-	-	-	-	
08/08/13	GoodApril	-	-	-	-	12/18/15	Metanautix	-	-	-	-	
07/18/13	Fifo Pty Ltd.	-	-	-	-	11/09/15	Secure Islands Technologies	-	-	-	-	
06/21/13	Elastic Intelligence	-	-	-	-	11/05/15	Mobile Data Labs	-	-	-	-	
01/28/13	Payment (assets)	-	-	-	-	10/02/15	Havok (assets)	-	-	-	-	
04/23/12	Demandforce	-	100%	\$424	\$424	09/29/15	Sensei Project Solutions (assets)	-	-	-	-	
04/10/12	AisleBuyer	-	-	-	-	09/28/15	Adxstudio (assets)	-	-	-	-	
05/11/10	Medfusion	-	100%	-	\$91	09/12/15	Double Labs	-	-	-	-	
09/14/09	Mint.com	-	100%	-	\$170	09/08/15	Adallom	-	-	-	-	
06/02/09	PayCycle	-	100%	-	\$170	09/03/15	VoloMetrix	-	-	-	-	
04/17/09	BooRah	-	-	-	-	08/03/15	Incent Games	-	-	-	-	
12/03/08	Entellium (CRM assets)	-	100%	-	\$8	07/16/15	FieldOne	-	-	-	-	
12/19/07	Electronic Clearing House	-	100%	\$131	\$122	06/10/15	BlueStripe Software	-	-	-	-	
						06/02/15	6Wunderkinder GmbH	-	-	-	-	
						04/14/15	Datazen Software	-	-	-	-	

[a] Acquired by McAfee prior to Intel acquisition

Note: "Known acquired value" includes only transactions for which data was publicly available

continued

M&A Activity

Most Active Software Acquirers continued

2007 - 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value	Announced	Target	Consideration		Equity Value	Enterprise Value	
		% Cash	% Stock					% Cash	% Stock			
Microsoft (continued)						Microsoft (continued)						CA
03/26/15	LiveLoop	-	-	-	-	02/21/09	3DV Systems	-	-	-	-	Cisco
02/12/15	N-trig	-	-	-	-	10/31/08	Wysiwyg Comunicacion Interactiva	-	-	-	-	
02/04/15	Sunrise Atelier	-	-	-	-	08/29/08	Greenfield Online	100%	-	\$486	\$455	Dell
01/23/15	Revolution Analytics	100%	-	-	-	07/24/08	DATAllegro	-	-	-	-	
01/20/15	Equivio	-	-	-	-	07/14/08	Zoomix	-	-	-	-	
12/11/14	Bit Stadium	-	-	-	-	07/01/08	Powerset	100%	-	-	-	
12/01/14	Acompli	-	-	-	-	06/26/08	MobiComp	-	-	-	-	EMC
11/13/14	Aorato	-	-	-	-	06/18/08	Navic Networks	-	-	-	-	
09/15/14	Mojang AB	-	-	-	\$2,500	04/17/08	Farecast	-	-	-	-	
07/11/14	InMage Systems	-	-	-	-	03/31/08	90 Degree Software	-	-	-	-	
05/28/14	Capptain	-	-	-	-	03/20/08	Komoku	-	-	-	-	HP
05/01/14	GreenButton Limited	-	-	-	-	03/14/08	Rapt	-	-	-	-	
03/04/14	Junction Solutions (JunctionMCR)	-	-	-	-	03/12/08	Kidaro	-	-	-	\$100	
01/27/14	Epic Games (assets)	-	-	-	-	02/27/08	YaData	-	-	-	\$25	
01/07/14	Parature	-	-	-	-	02/11/08	Danger	100%	-	-	\$500	IBM
10/23/13	Apiphany	-	-	-	-	02/07/08	Caligari Corporation	-	-	-	-	
09/03/13	Nokia (devices and services)	100%	-	-	\$5,010	01/21/08	Calista Technologies	-	-	-	\$125	
07/08/13	Blue Horseshoe (assets)	-	-	-	-	01/08/08	Fast Search & Transfer	100%	-	\$1,289	\$1,200	Intel
06/03/13	InCycle Software (assets)	-	-	-	-	12/12/07	Multimap	-	-	-	-	
03/19/13	Netbreeze GmbH	-	-	-	-	11/30/07	Webfives	-	-	-	-	
03/14/13	Pando Networks	-	-	-	-	11/12/07	Musiwave	-	-	-	\$50	Intuit
03/05/13	MetricsHub	-	-	-	-	10/29/07	GCS (assets)	-	-	-	-	
01/03/13	id8 Group R2 Studios	-	-	-	-	10/02/07	Jellyfish.com	-	-	-	-	
10/17/12	MarketingPilot Software	-	-	-	-	08/29/07	Parlano	-	-	-	-	
10/16/12	StorSimple	-	-	-	-	07/26/07	AdECN	-	-	-	-	Microsoft
10/04/12	PhoneFactor	-	-	-	-	06/08/07	Stratature	-	-	-	-	
07/09/12	Perceptive Pixel	-	-	-	-	06/05/07	Engyro	-	-	-	-	
06/25/12	Yammer	100%	-	\$1,200	\$1,200	05/18/07	aQuantive	100%	-	\$6,370	\$6,319	Oracle
06/07/11	Prodiance	-	-	-	-	05/03/07	ScreenTonic	-	-	-	-	
05/10/11	Skype Global	-	-	-	\$8,500	03/28/07	devBiz Business Solutions	-	-	-	-	
10/29/10	Canesta	-	-	-	-	03/14/07	eBECS (assets)	-	-	-	-	
10/06/10	AVlcode	-	-	-	-	03/14/07	Tellme Networks	-	-	-	-	Salesforce
12/11/09	Opalis Software	-	-	-	-	02/26/07	Medstory	-	-	-	-	
12/10/09	Sentillion	-	-	-	-							
11/09/09	SourceGear (Teamprise assets)	-	-	-	-	Oracle Known acquired value (since 2007):					\$41,995	SAP
09/22/09	Computer Generated Solutions (assets)	-	-	-	-	05/16/18	Datascience	-	-	-	-	
09/22/09	Fullscope (assets)	-	-	-	-	04/30/18	Vocado	-	-	-	-	
09/22/09	LS Retail EHF (assets)	-	-	-	-	02/15/18	Zenedge	-	-	-	-	
09/22/09	To-Increase Denmark A/S (assets)	-	-	-	-	12/17/17	Aconex	100%	-	-	\$1,200	Symantec
09/21/09	Interactive Supercomputing	-	-	-	-	04/18/17	Moat	-	-	-	-	
08/06/09	Office.com	-	-	-	-	04/17/17	Wercker US	-	-	-	-	
06/01/09	Rosetta Biosoftware	-	-	-	-	03/13/17	Webtrends (marketing analytics assets)	-	-	-	-	VMware
05/07/09	BigPark	-	-	-	-	01/19/17	Apiary	-	-	-	-	

continued

Note: "Known acquired value" includes only transactions for which data was publicly available

M&A Activity

Most Active Software Acquirers continued

2007 - 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value	Announced	Target	Consideration		Equity Value	Enterprise Value	
		% Cash	% Stock					% Cash	% Stock			
Oracle (continued)						Oracle (continued)						CA
11/21/16	Dyn	-	-	-	-	11/02/10	Art Technology Group	100%	-	\$1,000	\$848	Cisco
09/18/16	Palerra	-	-	-	-	10/05/10	Passlogix	-	-	-	-	
09/07/16	LogFire	-	-	-	-	05/26/10	eServGlobal (pre-paid software assets)	-	-	-	-	Dell
07/28/16	NetSuite	100%	-	\$9,300	\$9,174	05/25/10	Market2Lead (assets)	-	-	-	-	
05/02/16	Opower	100%	-	-	\$532	05/20/10	Secerno	-	-	-	-	
04/28/16	Textura	100%	-	-	\$663	04/16/10	Phase Forward	100%	-	\$755	\$714	EMC
04/14/16	Crosswise	100%	-	-	\$50	02/10/10	Convergin	-	-	-	-	
02/22/16	Ravello Systems	-	-	-	-	02/08/10	AmberPoint	-	-	-	-	
01/05/16	AddThis	100%	-	-	-	01/04/10	Silver Creek Systems	-	-	-	-	
12/18/15	StackEngine	-	-	-	-	10/12/09	Sophoi	-	-	-	-	
08/20/15	Maxymiser	-	-	-	-	09/29/09	HyperRoll	-	-	-	-	HP
12/22/14	Datalogix	-	-	-	-	07/23/09	GoldenGate Software	-	-	-	-	
09/14/14	Front Porch Digital	-	-	-	-	06/17/09	Conformia	-	-	-	-	
07/31/14	TOA Technologies	-	-	-	-	05/13/09	Virtual Iron	-	-	-	-	IBM
06/23/14	MICROS Systems	100%	-	\$5,300	\$4,642	04/20/09	Sun Microsystems	100%	-	\$7,400	\$5,667	
06/20/14	LiveLOOK	-	-	-	-	03/23/09	Relsys International	-	-	-	-	
05/15/14	GreenBytes	-	-	-	-	02/04/09	mValent	-	-	-	-	
02/24/14	BlueKai	-	-	-	-	01/07/09	Q-layers	[a]	-	-	-	Intel
01/07/14	Corente	-	-	-	-	11/03/08	Tacit Software	-	-	-	-	
12/20/13	Responsys	100%	-	\$1,608	\$1,500	10/29/08	Haley Ltd.	-	-	-	\$100	
11/15/13	Bitzer Mobile	-	-	-	-	10/08/08	Primavera Systems	-	-	-	-	Intuit
10/23/13	BigMachines	-	-	-	-	10/01/08	Advanced Visual Technology	-	-	-	\$5	
10/17/13	Compendium	-	-	-	-	09/02/08	ClearApp	-	-	-	-	
03/25/13	Tekelec	-	-	-	-	07/31/08	Global Knowledge Software	-	-	-	-	Microsoft
03/13/13	Nimbula	-	-	-	-	06/23/08	Skywire Software	-	-	-	-	
02/04/13	Acme Packet	100%	-	\$2,063	\$1,700	05/13/08	AdminServer	-	-	-	-	
12/20/12	Eloqua	100%	-	\$958	\$872	04/25/08	Montalvo Systems	[a]	-	-	\$25	
11/08/12	Instantis	-	-	-	-	04/09/08	Auptyma	-	-	-	-	Oracle
09/17/12	SelectMinds	-	-	-	-	03/27/08	Empirix (e-TEST software)	-	-	-	-	
07/30/12	Xsigo Systems	-	-	-	-	02/12/08	innotek	[a]	-	-	-	
07/19/12	Skire	-	-	-	-	01/16/08	BEA Systems	100%	-	\$8,352	\$6,852	Salesforce
07/10/12	Involver	-	-	-	-	01/16/08	Captovation	-	-	-	-	
06/05/12	Collective Intellect	-	-	-	-	01/16/08	MySQL	[a]	-	-	\$1,000	
05/23/12	Vitruve	-	-	-	-	12/06/07	Moniforce	-	-	-	-	
02/09/12	Taleo	100%	-	\$1,900	\$2,010	11/13/07	Vaau	[a]	-	-	-	SAP
10/24/11	RightNow Technologies	100%	-	\$1,500	\$1,434	10/24/07	Interlace Systems	-	-	-	-	
10/18/11	Endeca Technologies	-	-	-	-	10/09/07	LogicalApps	-	-	-	-	
09/22/11	GoAhead Software	-	-	-	-	09/12/07	Cluster File Systems	[a]	-	-	-	
07/28/11	InQuira	-	-	-	-	09/02/07	Netsure Telecom	-	-	-	-	Symantec
07/21/11	Ksplice	-	-	-	-	08/31/07	Bridgestream	-	-	-	-	
06/30/11	Pillar Data Systems	-	-	-	-	07/18/07	Bharosa	-	-	-	-	
06/21/11	FatWire Software	-	-	-	-	05/15/07	Agile Software	100%	-	\$495	\$301	VMware
06/20/11	Datanomic	-	-	-	-	05/01/07	Revenue Technologies	-	-	-	-	

[a] Acquired by Sun Microsystems prior to Oracle acquisition

Note: "Known acquired value" includes only transactions for which data was publicly available

continued

M&A Activity

Most Active Software Acquirers continued

2007 - 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value	Announced	Target	Consideration		Equity Value	Enterprise Value	
		% Cash	% Stock					% Cash	% Stock			
Oracle (continued)						Salesforce.com (continued)						
04/24/07	Lodestar	-	-	-	-	08/26/11	Navajo Systems	-	-	-	-	
04/18/07	AppForge	-	-	-	-	03/30/11	Radian6	85%	15%	-	\$326	
04/12/07	SavaJe Technologies	-	-	-	-	02/01/11	Manymoon	-	-	-	-	
03/23/07	Tangosol	-	-	-	-	01/06/11	Dimdim	100%	-	-	\$31	
03/01/07	Hyperion	100%	-	\$3,192	\$2,706	12/21/10	Etacts	-	-	-	-	
Salesforce.com						12/08/10	Heroku	100%	-	-	\$212	
					Known acquired value (since 2007):	\$15,294						
07/16/18	Datorama	-	-	-	\$800	09/24/10	Activa Live	-	-	-	-	
03/20/18	MuleSoft	80%	20%	\$6,580	\$6,500	06/04/10	Sitemasher	-	-	-	-	
01/08/18	Attic Labs	-	-	-	-	04/21/10	Jigsaw Data Corporation	100%	-	-	\$142	
01/24/17	Sequence	-	-	-	-	01/21/10	Informavores	-	-	-	-	
01/13/17	Unity&Variety	-	-	-	-	12/11/09	GroupSwim	-	-	-	-	
12/13/16	Twin Prime	-	-	-	-	08/04/08	InStranet	-	-	\$32	\$27	
10/04/16	Krux	50%	50%	-	\$680	10/23/07	CrispyNews	-	-	-	-	
09/15/16	Gravity Tank	-	-	-	-	04/10/07	Koral	-	-	-	-	
09/07/16	Heywire	-	-	-	-	SAP					Known acquired value (since 2007):	\$32,124
08/15/16	BeyondCore	-	-	-	\$110	06/05/18	Coresystems	-	-	-	-	
08/01/16	Quip	-	100%	\$410	\$410	01/30/18	CallidusCloud	100%	-	-	\$2,400	
07/21/16	Coolan	-	-	-	-	01/22/18	Recast.AI SAS	-	-	-	-	
06/01/16	Demandware	100%	-	-	\$2,800	09/24/17	Gigya	-	-	-	\$325	
05/09/16	Implicit	-	-	-	-	12/14/16	Abakus	-	-	-	-	
04/04/16	MetaMind	-	-	-	-	09/28/16	PLAT.ONE	-	-	-	-	
02/19/16	TappingStone	-	-	-	-	09/27/16	Altiscale	-	-	-	-	
12/23/15	SteelBrick	-	100%	\$360	\$300	06/21/16	Fedem Technology	-	-	-	-	
12/14/15	MinHash	-	-	-	-	02/16/16	MeLLmo	-	-	-	-	
09/02/15	AKTA	-	-	-	-	10/13/15	Multiposting	-	-	-	-	
06/25/15	Kerensen Consulting SAS	100%	-	-	\$24	09/18/14	Concur Technologies	-	-	\$8,300	\$8,113	
05/29/15	Tempo.ai	-	-	-	-	05/20/14	SeeWhy	-	-	-	-	
04/01/15	Toopher	-	-	-	-	03/26/14	Fieldglass	-	-	-	-	
07/10/14	RelateIQ	-	100%	\$392	\$352	09/10/13	KXEN	-	-	-	-	
11/18/13	Cloudconnect.com	-	-	-	-	06/05/13	hybris GmbH	100%	-	-	\$1,341	
06/07/13	EdgeSpring	47%	53%	-	\$134	05/16/13	KMS Software	-	-	-	-	
06/04/13	ExactTarget	100%	-	\$2,500	\$2,399	03/07/13	Camilion Solutions	-	-	-	-	
02/06/13	EntropySoft	-	-	-	-	02/22/13	SmartOps	-	-	-	-	
09/11/12	BlueTail	-	-	-	-	01/31/13	Ticket-Web GmbH	-	-	-	-	
07/09/12	Golnstant	100%	-	-	\$51	05/22/12	Ariba	100%	-	\$4,500	\$4,267	
06/25/12	Thinkfuse	-	-	-	-	04/30/12	Purisma	100%	-	\$2	\$2	
06/18/12	ChoicePass	-	-	-	-	04/10/12	Syclo	-	-	-	-	
06/04/12	Buddy Media	-	-	-	\$689	01/16/12	Datango AG (assets)	-	-	-	-	
05/01/12	Stypi	-	-	-	-	12/03/11	SuccessFactors	100%	-	\$3,650	\$3,400	
12/15/11	Rypple	-	-	-	-	09/20/11	Crossgate AG	-	-	-	-	
11/14/11	Model Metrics	100%	-	-	\$58	09/06/11	Right Hemisphere	-	-	-	-	
09/21/11	Assistly	100%	-	-	\$50	01/12/11	SECUDE AG (IdM assets)	-	-	-	-	

continued

Note: "Known acquired value" includes only transactions for which data was publicly available

M&A Activity

Most Active Software Acquirers continued

2007 - 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value	Announced	Target	Consideration		Equity Value	Enterprise Value	
		% Cash	% Stock					% Cash	% Stock			
SAP (continued)						Symantec (continued)						
12/16/10	cundus AG (disclosure management assets)	-	-	-	-	06/06/08	SwapDrive	100%	-	-	\$123	
05/12/10	Sybase	100%	-	\$6,100	\$5,800	04/09/08	AppStream	100%	-	-	\$52	
04/21/10	TechniData AG	-	-	-	-	01/02/08	Transparent Logic	100%	-	-	\$12	
12/03/09	SOALogix	-	-	-	-	11/05/07	Vontu	100%	-	-	\$350	
07/20/09	SAF Simulation, Analysis & Forecasting	100%	-	-	-	02/23/07	4FrontSecurity	100%	-	-	\$7	
06/10/09	SkyData Systems	-	-	-	-	01/29/07	Altiris	100%	-	\$1,030	\$830	
05/11/09	Clear Standards	-	-	-	-	VMware					Known acquired value (since 2007):	\$3,990
05/06/09	Highdeal	-	-	-	-	03/28/18	E8 Security	-	-	-	-	
02/18/09	Coghead	-	-	-	-	02/22/18	CloudVeloX (Talent and technology assets)	-	-	-	-	
07/10/08	Ness Technologies (SAP distribution division)	-	-	-	\$21	02/14/18	CloudCoreo	-	-	-	-	
06/17/08	Visiprise	-	-	-	-	11/02/17	VeloCloud Networks	100%	-	-	-	
10/17/07	YASU Technologies	-	-	-	-	05/15/17	Aptelligent	100%	-	-	-	
10/07/07	Business Objects	100%	-	\$6,770	\$6,455	04/12/17	Wavefront	-	-	-	-	
05/14/07	MaXware	-	-	-	-	12/19/16	PLUMgrid	-	-	-	-	
05/14/07	Wicom Communications	-	-	-	-	06/13/16	Arkin Net	-	-	-	-	
05/08/07	OutlookSoft	-	-	-	-	10/14/15	Boxer	-	-	-	-	
02/20/07	Pilot Software	-	-	-	-	02/03/15	Immidio	-	-	-	-	
Symantec						10/29/14	Continuent (assets)	-	-	-	-	
11/06/17	SurfEasy	100%	-	-	\$39	08/20/14	CloudVolumes	-	-	-	-	
10/25/17	Outlier Security	-	-	-	-	08/04/14	Virtual System (cloud migration assets)	-	-	-	-	
07/11/17	Skycure	-	-	-	-	03/06/14	Third Sky	-	-	-	-	
07/06/17	Fireglass	-	-	-	-	01/22/14	AirWatch	76%	24%	-	\$1,540	
06/03/17	Watchful Software	-	-	-	-	10/15/13	Deskstone	-	-	-	-	
11/20/16	Lifelock	100%	-	\$2,335	\$2,300	02/11/13	Virsto Software	100%	-	-	\$185	
06/12/16	Blue Coat Systems	100%	-	-	\$4,650	08/07/12	Pattern Insight (assets)	-	-	-	-	
08/20/15	Blackfin Security Group	-	-	-	-	07/23/12	Nicira	83%	17%	-	\$1,260	
01/12/15	Narus	-	-	-	-	07/02/12	DynamicOps	-	-	-	-	
05/28/14	Nitrodesk	-	-	-	-	05/22/12	Wanova	-	-	-	\$75	
07/18/13	PasswordBank	-	-	-	-	04/24/12	Cetas Software	-	-	-	-	
03/20/12	Nukona	100%	-	-	\$28	08/26/11	PacketMotion	-	-	-	-	
03/05/12	Odyssey Software	-	-	-	-	06/13/11	Digital Fuel Technologies	-	-	-	-	
01/16/12	LiveOffice	-	-	-	\$115	05/31/11	Socialcast	-	-	-	-	
05/19/11	Clearwell Systems	-	-	\$410	\$390	05/16/11	Shavlik Technologies	-	-	-	-	
05/19/10	VeriSign (identity & authentication assets)	100%	-	-	\$1,280	04/26/11	SlideRocket	-	-	-	-	
04/29/10	GuardianEdge	100%	-	-	\$73	04/15/11	EMC (Mozy assets)	-	-	-	\$8	
04/29/10	PGP Corporation	100%	-	-	\$300	03/08/11	WaveMaker	-	-	-	-	
01/12/10	Gideon Technology	-	-	-	-	01/14/11	NeoAccel	100%	-	-	\$15	
11/01/09	SoftScan	-	-	-	-	08/31/10	Integrien	-	-	-	\$100	
04/21/09	Mi5 Networks	-	-	-	\$18	08/31/10	TriCipher	-	-	-	-	
10/08/08	MessageLabs	100%	-	-	\$695	05/06/10	GemStone Systems	-	-	-	-	
08/18/08	PC Tools	100%	-	-	\$250	04/13/10	Rabbit Technologies	100%	-	-	-	
08/05/08	nSuite Technologies	100%	-	-	\$20	02/25/10	EMC (Ionix software assets)	100%	-	-	\$200	

continued

Note: "Known acquired value" includes only transactions for which data was publicly available

M&A Activity

Most Active Software Acquirers continued

2007 – 2Q 2018 (\$ millions)

Announced	Target	Consideration		Equity Value	Enterprise Value
		% Cash	% Stock		
VMware (continued)					
02/23/10	RTO Software	-	-	-	-
01/12/10	Zimbra	100%	-	-	\$100
08/10/09	SpringSource	100%	-	\$362	\$362
11/26/08	Tungsten Graphics	-	-	-	-
11/10/08	Trango Virtual Processors	-	-	-	-
10/09/08	Blue Lane Technologies	-	-	-	-
05/28/08	B-hive Networks	-	-	-	\$61
01/15/08	Thininstall	-	-	-	-
01/14/08	Foedus	-	-	-	-
10/01/07	Sciant	-	-	-	\$9
09/11/07	Dunes Technologies	100%	-	-	\$45
08/07/07	Determina	100%	-	-	\$9
06/11/07	Propero	100%	-	-	\$21

CA

Cisco

Dell

EMC

HP

IBM

Intel

Intuit

Microsoft

Oracle

Salesforce

SAP

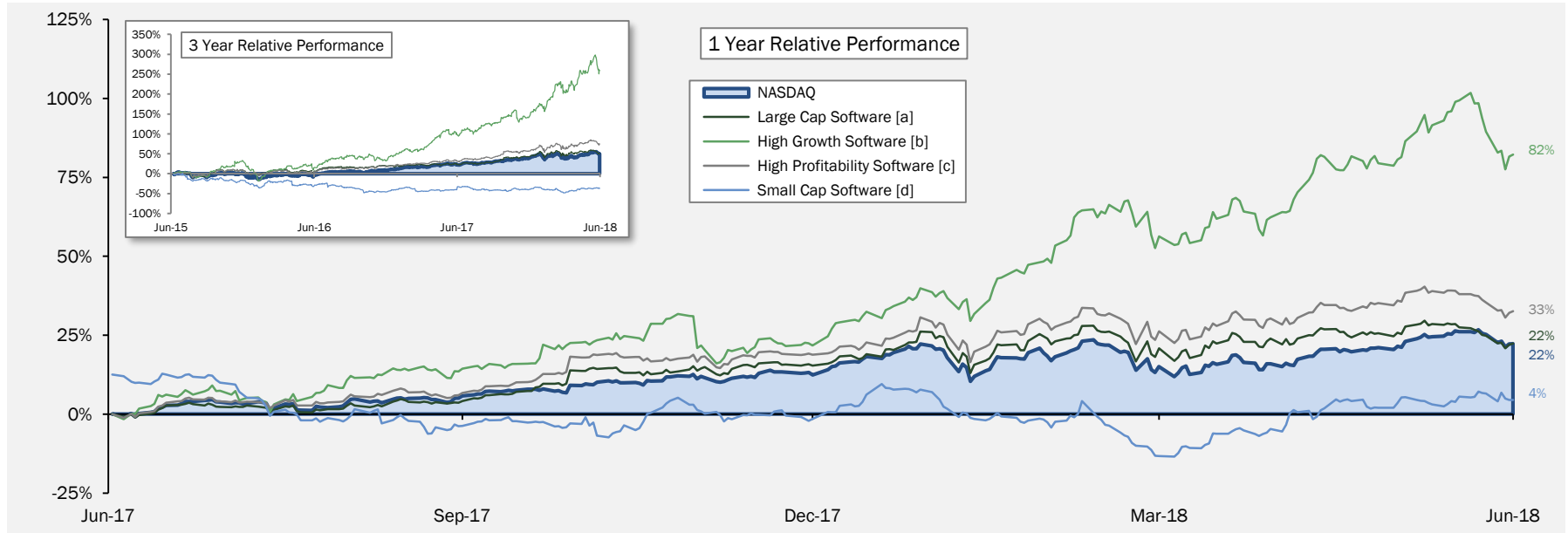
Symantec

VMware

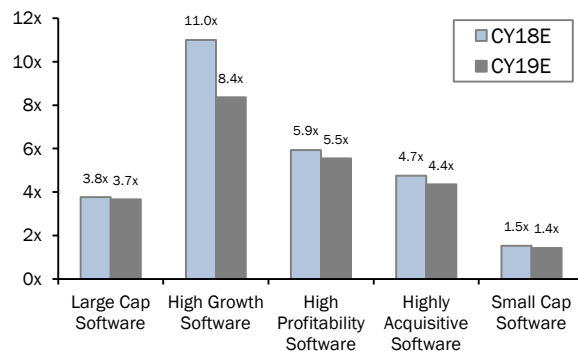
Note: "Known acquired value" includes only transactions for which data was publicly available

Public Equity Market Valuations

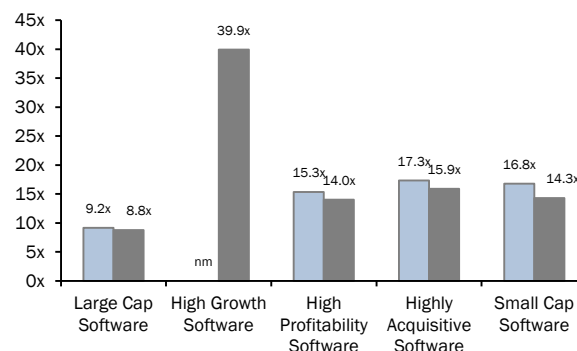
LTM Relative Performance of Shea & Company Software Indices



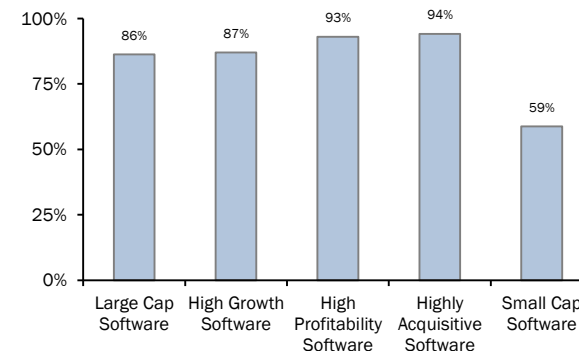
Median EV / Revenue



Median EV / EBITDA



Median % of 52 Week High



Note: EV / EBITDA multiples in excess of 50x or less than 0x are considered to be not meaningful

Sources: Company releases, Wall Street research

[a] Large Cap Software includes: MSFT, ORCL, INTC, CSCO, IBM, SAP, HPE

[b] High Growth Software includes: VERI, CDLX, SMAR, SHOP, MDB, AYX, OKTA, ZS, YEXT, PS, XRO, NOW, ZEN, ADSK, TLDN, PFPT, ZUO, TEAM, DWCH, NEWR, PSTG, EVBG, BL, BOXL, SPLK, HUBS

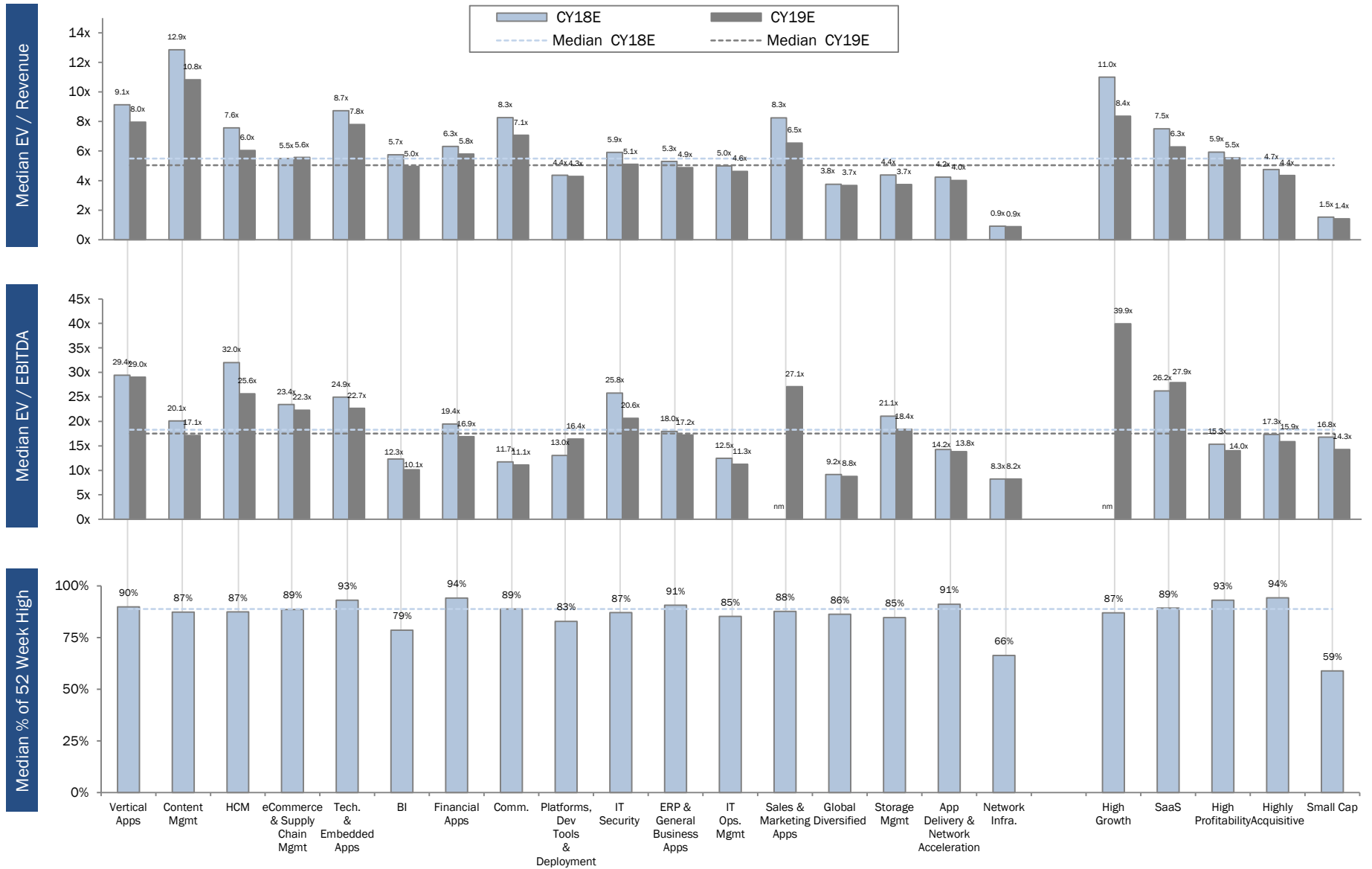
[c] High Profitability Software includes: VRSN, MSCI, CHKP, PRGS, AZPN, ORCL, ANSS, ADBE, SYMC, INTC, MSFT, PAYC, JCOM, FFIV, AKAM, CA, TEMN, VMW, EBIX, FISV, FIS, LOGM, INTU, QLYS, OTEX, UPLD, CSCO, CTXS, MCRO, JHKY

[d] Small Cap Software includes: ATTU, ASUR, AVID, ABT, CYRN, RUBI, DWCH, NTWK, BOXL, MRIN, NJX, DTRM, TISA, FALC, TNTR

Highly Acquisitive Software includes: DHR, ROP, MCRO, TSX: CSU; OTEX, SSNC, JCOM, TSX: DSG, EPAY, TSX: ENGH, UPLD, ASUR

Public Equity Market Valuations

Price Performance and Valuation Metrics by Segment



Note: EV / EBITDA multiples in excess of 50x or less than 0x are considered to be not meaningful
 Sources: Company releases, Wall Street research

Public Equity Market Valuations

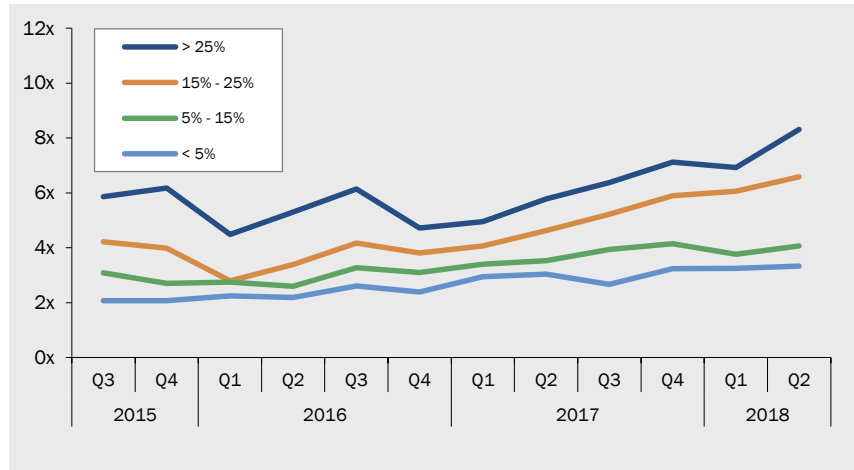
Equity Trading Multiples by Growth Tranche

Market Valuations of Publicly Traded Software Companies by Growth Tranche

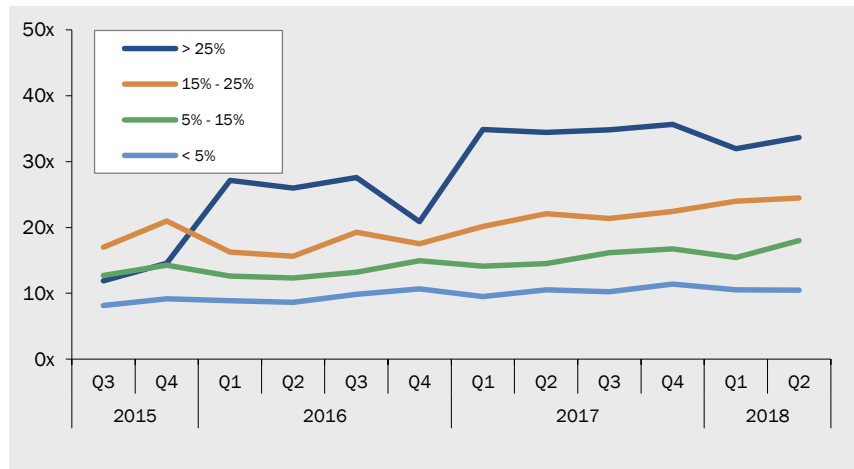
Revenue Growth	Date	EV / Revenue				EV / EBITDA			
		Current Year		Forward Year		Current Year		Forward Year	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median
< 5%	Q2 2018	3.5 x	3.4 x	3.4 x	3.3 x	11.7 x	11.3 x	12.2 x	10.5 x
	Q1 2018	3.3	3.3	3.2	3.2	11.6	11.0	12.2	10.5
	Q4 2017	3.8	3.3	3.6	3.2	14.0	11.2	12.9	11.4
	Q3 2017	3.4	2.7	3.2	2.7	11.6	10.7	11.0	10.2
	Q2 2017	3.2	3.1	3.1	3.0	11.6	11.0	12.3	10.5
	Q1 2017	2.9	3.0	2.9	2.9	10.6	10.5	9.9	9.5
	Q4 2016	2.8	2.4	2.7	2.4	12.4	10.1	12.0	10.6
	Q3 2016	3.0	2.7	2.9	2.6	11.4	9.8	11.4	9.8
	Q2 2016	2.6	2.2	2.5	2.2	10.5	8.4	9.3	8.6
	Q1 2016	2.5	2.3	2.5	2.2	10.2	9.5	8.9	8.9
	Q4 2015	2.5	2.1	2.4	2.1	10.7	8.4	10.5	9.1
	Q3 2015	2.4	2.1	2.4	2.1	9.2	8.5	8.7	8.1
5% - 15%	Q2 2018	5.0 x	4.4 x	4.5 x	4.1 x	22.7 x	20.7 x	19.6 x	18.0 x
	Q1 2018	4.2	4.1	3.9	3.8	18.1	17.5	16.9	15.4
	Q4 2017	4.5	4.5	4.2	4.1	21.2	19.4	17.7	16.8
	Q3 2017	4.3	4.2	4.0	3.9	19.6	18.0	17.9	16.2
	Q2 2017	4.1	3.8	3.7	3.5	17.8	16.3	16.6	14.5
	Q1 2017	3.8	3.8	3.5	3.4	17.3	15.7	15.2	14.1
	Q4 2016	3.9	3.4	3.5	3.1	17.3	16.7	15.5	14.9
	Q3 2016	3.8	3.5	3.5	3.3	17.0	14.9	14.6	13.2
	Q2 2016	3.5	2.8	3.2	2.6	15.2	14.2	13.9	12.3
	Q1 2016	3.4	3.0	3.2	2.8	14.8	14.1	13.6	12.6
	Q4 2015	4.0	2.9	3.6	2.7	16.1	15.0	16.5	14.3
	Q3 2015	3.6	3.4	3.3	3.1	15.3	14.0	14.9	12.7
15% - 25%	Q2 2018	8.1 x	7.9 x	6.7 x	6.6 x	29.2 x	28.8 x	27.6 x	24.5 x
	Q1 2018	7.3	7.1	6.0	6.1	29.4	27.0	26.9	24.0
	Q4 2017	6.9	6.9	5.8	5.9	28.2	27.4	24.6	22.4
	Q3 2017	6.3	6.3	5.2	5.2	27.5	26.2	23.7	21.3
	Q2 2017	5.4	5.6	4.5	4.6	28.6	25.9	22.9	22.1
	Q1 2017	4.7	4.8	3.9	4.1	24.8	23.7	20.6	20.1
	Q4 2016	4.5	4.5	3.8	3.8	23.5	21.6	19.4	17.5
	Q3 2016	4.7	5.2	3.9	4.2	24.7	23.6	19.2	19.3
	Q2 2016	4.3	4.0	3.6	3.4	21.2	17.4	18.2	15.6
	Q1 2016	3.7	3.3	3.1	2.8	21.7	18.1	18.2	16.3
	Q4 2015	4.9	4.9	4.1	4.0	25.8	25.5	20.3	21.0
	Q3 2015	4.4	5.0	3.7	4.2	25.7	23.0	19.3	17.0
> 25%	Q2 2018	10.6 x	11.3 x	8.0 x	8.3 x	37.5 x	37.5 x	35.4 x	33.7 x
	Q1 2018	8.3	8.8	6.3	6.9	42.4	42.5	33.7	32.0
	Q4 2017	9.1	9.3	6.7	7.1	27.0	17.7	29.0	35.6
	Q3 2017	9.2	8.3	6.6	6.4	29.6	28.1	31.7	34.8
	Q2 2017	7.1	7.3	5.5	5.8	28.0	27.8	33.3	34.5
	Q1 2017	6.4	6.5	5.0	4.9	39.2	39.2	33.3	34.9
	Q4 2016	6.3	6.1	4.9	4.7	25.2	24.2	21.4	20.9
	Q3 2016	8.3	8.6	6.4	6.1	28.7	34.9	27.3	27.6
	Q2 2016	6.7	6.9	5.0	5.3	35.7	34.0	24.2	26.0
	Q1 2016	5.6	5.8	4.3	4.5	33.6	38.7	29.0	27.1
	Q4 2015	7.8	8.3	5.8	6.2	21.7	17.3	25.1	14.6
	Q3 2015	7.3	7.9	5.4	5.9	24.7	16.2	20.3	11.9

Note: EV / EBITDA multiples in excess of 50x or less than 0x are considered to be not meaningful
Sources: Company releases, Wall Street research

Forward Year Median EV / Revenue by Growth Tranche

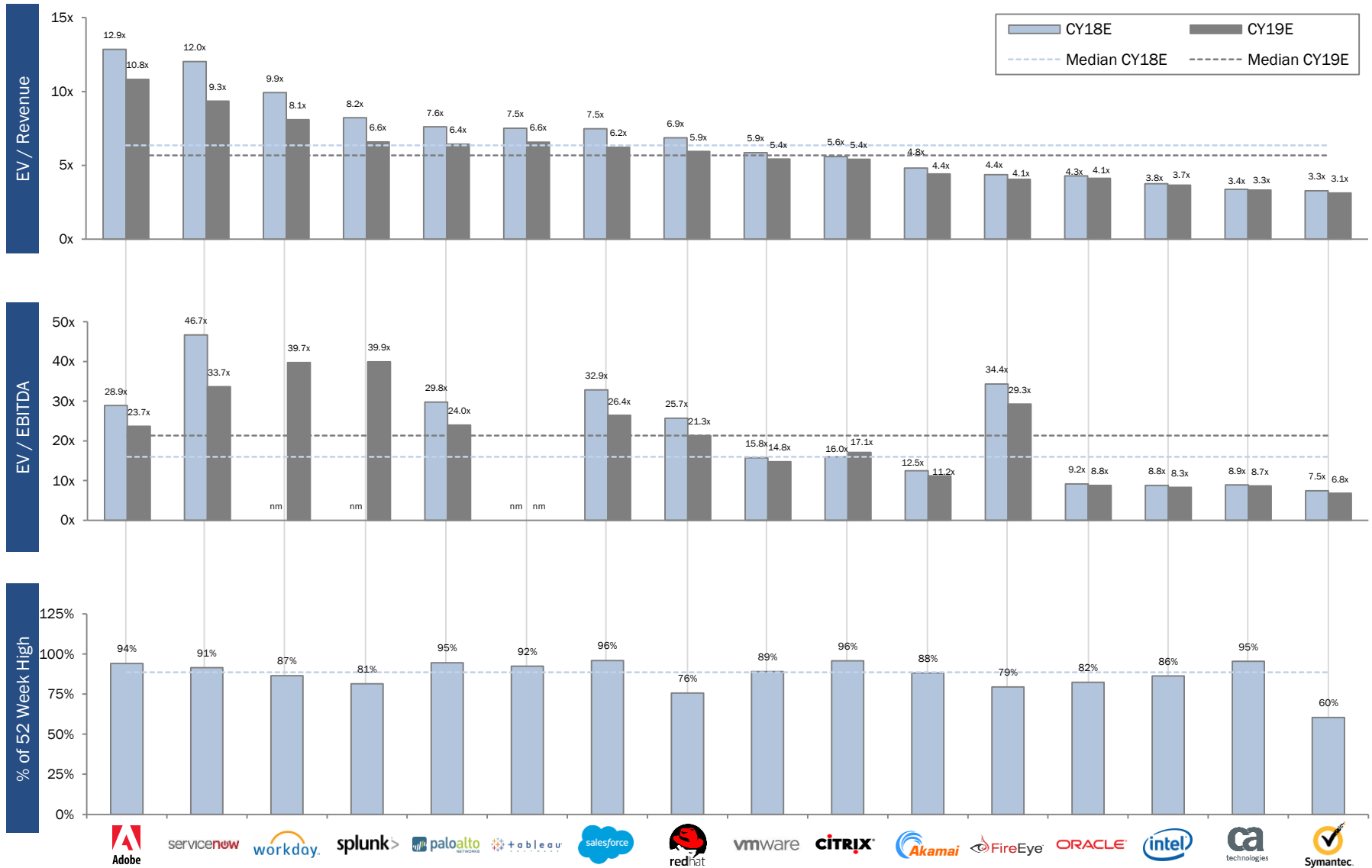


Forward Year Median EV / EBITDA by Growth Tranche



Public Equity Market Valuations

Price Performance and Valuation Metrics of Selected Software Vendors



Note: EV / EBITDA multiples in excess of 50x or less than 0x are considered to be not meaningful
 Sources: Company releases, Wall Street research

Public Equity Market Valuations

Equity Trading Multiples by Segment

(\$ millions)

Company	Share Price (06/30/18)	Market Value	Enterprise Value	Revenue [a]			EV / Revenue		EBITDA [a]				EV / EBITDA [b]		P / E Multiple [b]	
				CY18E	CY19E	y/y	CY18E	CY19E	CY18E	mgn	CY19E	mgn	CY18E	CY19E	CY18E	CY19E
Global Diversified																
Microsoft	\$ 98.61	\$ 757,640	\$ 714,006	\$ 115,273	\$ 125,675	9%	6.2 x	5.7 x	\$ 47,928	42%	\$ 53,766	43%	14.9 x	13.3 x	24.8 x	23.1 x
Intel	49.71	231,649	256,687	68,298	70,057	3%	3.8	3.7	29,156	43%	30,843	44%	8.8	8.3	12.4	12.0
Cisco Systems	43.03	202,365	176,072	50,174	51,570	3%	3.5	3.4	17,561	35%	17,666	34%	10.0	10.0	15.7	14.2
Oracle	44.06	178,224	172,238	40,238	41,794	4%	4.3	4.1	18,820	47%	19,619	47%	9.2	8.8	13.3	12.5
SAP AG	111.85	135,687	135,252	27,497	29,589	8%	4.9	4.6	9,066	33%	9,945	34%	14.9	13.6	22.7	20.4
IBM	139.70	128,240	161,987	80,799	80,875	0%	2.0	2.0	18,829	23%	19,699	24%	8.6	8.2	10.1	9.9
HP Enterprise	14.61	22,119	29,794	30,627	31,107	2%	1.0	1.0	5,357	17%	5,365	17%	5.6	5.6	9.9	9.2
			Mean	\$ 58,987	\$ 61,524	4%	3.7 x	3.5 x	\$ 20,960	34%	\$ 22,415	35%	10.3 x	9.7 x	15.6 x	14.5 x
			Median	50,174	51,570	3%	3.8	3.7	18,820	35%	19,619	34%	9.2	8.8	13.3	12.5
Application Delivery & Network Acceleration																
Citrix Systems	\$ 104.84	\$ 14,208	\$ 16,277	\$ 2,908	\$ 3,005	3%	5.6 x	5.4 x	\$ 1,017	35%	\$ 951	32%	16.0 x	17.1 x	19.8 x	18.0 x
Akamai Technologies	73.23	12,508	13,034	2,709	2,950	9%	4.8	4.4	1,044	39%	1,167	40%	12.5	11.2	22.4	19.4
F5 Networks	172.45	10,539	9,515	2,177	2,235	3%	4.4	4.3	842	39%	905	40%	11.3	10.5	17.7	16.3
Radware	25.28	1,148	952	232	253	9%	4.1	3.8	25	11%	33	13%	37.6	28.9	71.2	48.0
Limelight Networks	4.47	495	451	203	223	10%	2.2	2.0	37	18%	46	21%	12.2	9.8	30.1	22.0
A10 Networks	6.23	450	326	241	258	7%	1.4	1.3	13	5%	20	8%	25.9	16.4	nm	38.9
			Mean	\$ 1,412	\$ 1,487	7%	3.7 x	3.5 x	\$ 496	24%	\$ 520	26%	19.2 x	15.6 x	32.2 x	27.1 x
			Median	1,209	1,247	8%	4.2	4.0	439	27%	475	26%	14.2	13.8	22.4	20.7
Business Intelligence																
Tableau Software	\$ 97.75	\$ 8,233	\$ 7,367	\$ 980	\$ 1,120	14%	7.5 x	6.6 x	\$ 19	2%	\$ 82	7%	nm x	nm x	nm x	nm x
Alteryx	38.16	2,416	2,237	186	245	32%	12.0	9.1	(11)	nm	(3)	nm	nm	nm	nm	nm
Cloudera	13.64	2,182	1,752	442	526	19%	4.0	3.3	(82)	nm	(61)	nm	nm	nm	nm	nm
Talend	62.28	1,845	1,751	204	261	28%	8.6	6.7	(10)	nm	(0)	nm	nm	nm	nm	nm
Inovalon	9.93	1,513	1,305	564	644	14%	2.3	2.0	161	28%	194	30%	8.1	6.7	29.6	25.0
MicroStrategy	127.75	1,462	767	510	522	2%	1.5	1.5	47	9%	57	11%	16.5	13.5	54.1	42.7
			Mean	\$ 481	\$ 553	18%	6.0 x	4.9 x	\$ 21	13%	\$ 45	16%	12.3 x	10.1 x	41.9 x	33.8 x
			Median	476	524	17%	5.7	5.0	5	9%	28	11%	12.3	10.1	41.9	33.8

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Public Equity Market Valuations

Equity Trading Multiples by Segment continued

(\$ millions)

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				CY18E	CY19E	y/y	CY18E	CY19E	CY18E	mgn	CY19E	mgn	CY18E	CY19E	CY18E	CY19E
Communications																
Amdocs	\$ 65.71	\$ 9,428	\$ 8,924	\$ 4,054	\$ 4,054	0%	2.2 x	2.2 x	\$ 804	20%	\$ 804	20%	11.1 x	11.1 x	16.0 x	16.0 x
RingCentral	70.35	5,818	6,080	643	792	23%	9.5	7.7	76	12%	99	13%	nm	nm	nm	89.5
Verint Systems	44.35	2,839	3,635	1,230	1,306	6%	3.0	2.8	293	24%	330	25%	12.4	11.0	14.2	12.8
Five9	34.57	1,994	1,961	238	277	17%	8.3	7.1	29	12%	40	14%	nm	49.4	nm	81.2
Everbridge	47.42	1,391	1,445	139	175	26%	10.4	8.2	(3)	nm	3	2%	nm	nm	nm	nm
Mean			\$ 1,261	\$ 1,321	14%	6.6 x	5.6 x	\$ 240	17%	\$ 255	15%	11.7 x	23.8 x	15.1 x	49.9 x	
Median			643	792	17%	8.3	7.1	76	16%	99	14%	11.7	11.1	15.1	48.6	
Content Management																
Adobe	\$ 243.81	\$ 119,385	\$ 114,935	\$ 8,937	\$ 10,620	19%	12.9 x	10.8 x	\$ 3,976	44%	\$ 4,850	46%	28.9 x	23.7 x	36.1 x	31.7 x
OpenText	35.19	9,412	11,476	2,836	2,848	0%	4.0	4.0	1,018	36%	1,083	38%	11.3	10.6	13.6	12.5
Docusign	52.95	8,903	8,633	656	790	20%	13.2	10.9	33	5%	72	9%	nm	nm	nm	nm
Mean			\$ 4,143	\$ 4,753	13%	10.0 x	8.6 x	\$ 1,676	28%	\$ 2,002	31%	20.1 x	17.1 x	24.8 x	22.1 x	
Median			2,836	2,848	19%	12.9	10.8	1,018	36%	1,083	38%	20.1	17.1	24.8	22.1	
eCommerce & Supply Chain Management																
Shopify	\$ 145.89	\$ 16,091	\$ 14,511	\$ 1,019	\$ 1,398	37%	14.2 x	10.4 x	\$ 39	4%	\$ 93	7%	nm x	nm x	nm x	nm x
Manhattan Associates	47.01	3,141	3,022	551	543	-1%	5.5	5.6	142	26%	128	24%	21.3	23.6	31.2	34.5
Descartes Systems	32.55	2,500	2,515	276	304	10%	9.1	8.3	94	34%	109	36%	26.7	23.2	27.4	24.3
SPS Commerce	73.48	1,297	1,131	243	267	10%	4.7	4.2	44	18%	53	20%	25.6	21.4	51.2	44.2
American Software	14.57	443	364	120	133	10%	3.0	2.7	21	18%	27	20%	17.3	13.5	33.9	24.3
Mean			\$ 442	\$ 529	13%	7.3 x	6.2 x	\$ 68	20%	\$ 82	21%	22.7 x	20.4 x	35.9 x	31.8 x	
Median			276	304	10%	5.5	5.6	44	18%	93	20%	23.4	22.3	32.5	29.4	

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Public Equity Market Valuations

Equity Trading Multiples by Segment continued

(\$ millions)

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				CY18E	CY19E	y/y	CY18E	CY19E	CY18E	mgn	CY19E	mgn	CY18E	CY19E	CY18E	CY19E
ERP & General Business Applications																
Salesforce.com	\$ 136.40	\$ 101,333	\$ 98,162	\$ 13,126	\$ 15,768	20%	7.5 x	6.2 x	\$ 2,986	23%	\$ 3,714	24%	32.9 x	26.4 x	59.1 x	50.4 x
Constellation Software	774.86	16,420	16,343	3,082	3,496	13%	5.3	4.7	778	25%	908	26%	21.0	18.0	27.4	24.1
Sage Group	7.98	8,650	9,571	2,336	2,500	7%	4.1	3.8	686	29%	748	30%	13.9	12.8	19.9	17.7
Zendesk	54.49	5,828	6,105	571	734	29%	10.7	8.3	39	7%	67	9%	nm	nm	nm	nm
Aveva Group	34.11	5,499	5,365	578	953	65%	9.3	5.6	190	33%	250	26%	28.2	21.4	29.0	30.5
Medidata Solutions	80.56	4,850	4,994	640	760	19%	7.8	6.6	155	24%	200	26%	32.2	25.0	50.4	39.9
j2 Global	86.61	4,274	5,350	1,230	1,326	8%	4.3	4.0	497	40%	557	42%	10.8	9.6	14.2	12.7
Smartsheet	25.97	2,750	2,706	161	225	40%	16.8	12.0	(50)	nm	(58)	nm	nm	nm	nm	nm
Enghouse Systems Ltd.	58.35	1,599	1,480	266	291	9%	5.6	5.1	78	29%	86	30%	18.9	17.2	34.0	30.4
PROS	36.57	1,195	1,514	191	221	16%	7.9	6.8	(25)	nm	(14)	nm	nm	nm	nm	nm
Workiva	24.40	1,102	1,040	237	268	13%	4.4	3.9	(27)	nm	(19)	nm	nm	nm	nm	nm
QAD	50.15	1,049	918	332	354	7%	2.8	2.6	18	6%	21	6%	nm	44.5	nm	96.4
TechnologyOne	3.06	966	922	212	246	16%	4.3	3.8	52	24%	59	24%	17.8	15.5	26.6	22.4
Upland Software	34.37	753	881	137	148	8%	6.4	5.9	49	36%	54	37%	18.0	16.3	22.2	20.2
Basware	40.68	585	577	160	176	10%	3.6	3.3	2	1%	11	6%	nm	nm	nm	nm
ServiceSource	3.94	358	323	248	262	6%	1.3	1.2	21	8%	28	11%	15.5	11.4	38.1	23.6
Synchronoss Technologies	6.17	293	232	463	n/a	n/a	0.5	n/a	125	27%	n/a	n/a	1.9	nm	6.6	nm
Mean				\$ 1,410	\$ 1,733	18%	6.0 x	5.2 x	\$ 328	22%	\$ 413	23%	19.2 x	19.8 x	29.8 x	33.5 x
Median				332	322	13%	5.3	4.9	52	25%	63	26%	18.0	17.2	27.4	24.1

Global Diversified

Application Delivery & Network Acceleration

Business Intelligence

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Public Equity Market Valuations

Equity Trading Multiples by Segment continued

(\$ millions)

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				CY18E	CY19E	y/y	CY18E	CY19E	CY18E	mgn	CY19E	mgn	CY18E	CY19E	CY18E	CY19E
Financial Applications																
Intuit	\$ 204.31	\$ 52,843	\$ 51,357	\$ 6,171	\$ 6,833	11%	8.3 x	7.5 x	\$ 2,241	36%	\$ 2,483	36%	22.9 x	20.7 x	36.2 x	30.2 x
FIS	106.03	35,303	43,770	8,552	8,850	3%	5.1	4.9	3,147	37%	3,330	38%	13.9	13.1	20.3	18.2
Fiserv	74.09	30,891	35,113	5,853	6,118	5%	6.0	5.7	2,171	37%	2,261	37%	16.2	15.5	23.7	21.1
MSCI	165.43	14,736	15,965	1,439	1,570	9%	11.1	10.2	788	55%	878	56%	20.3	18.2	31.4	27.0
SS&C Technologies	51.90	12,795	14,708	3,402	4,183	23%	4.3	3.5	1,066	31%	1,394	33%	13.8	10.5	22.5	18.0
Temenos Group	156.00	10,806	11,061	847	948	12%	13.1	11.7	316	37%	364	38%	35.0	30.4	52.9	45.0
Jack Henry	130.36	10,076	10,124	1,572	1,662	6%	6.4	6.1	544	35%	620	37%	18.6	16.3	33.9	30.8
Fair Isaac	193.32	5,904	6,500	1,049	1,132	8%	6.2	5.7	264	25%	315	28%	24.6	20.7	28.8	24.9
Xero	32.41	4,480	4,422	347	451	30%	12.8	9.8	44	13%	83	18%	nm	nm	nm	nm
Avalara	53.37	3,831	3,875	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	nm	nm	nm
Ellie Mae	103.84	3,666	3,435	499	587	18%	6.9	5.8	131	26%	167	28%	26.2	20.6	58.8	42.3
Coupa Software	62.24	3,548	3,513	236	292	24%	14.9	12.0	(2)	nm	10	4%	nm	nm	nm	nm
Zuora	27.20	3,285	3,098	222	281	27%	14.0	11.0	(47)	nm	(39)	nm	nm	nm	nm	nm
SimCorp	77.55	3,055	3,058	433	467	8%	7.1	6.6	123	28%	133	28%	24.9	23.0	35.1	32.1
Envestnet	54.95	2,561	3,112	817	919	12%	3.8	3.4	153	19%	184	20%	20.4	16.9	30.3	25.1
Q2 Holdings	57.05	2,459	2,570	238	293	23%	10.8	8.8	(12)	nm	(12)	nm	nm	nm	nm	nm
Ebiz	76.25	2,401	2,747	454	485	7%	6.1	5.7	168	37%	188	39%	16.3	14.6	20.2	17.6
BlackLine	43.43	2,321	2,207	224	281	25%	9.8	7.9	11	5%	19	7%	nm	nm	nm	nm
Bottomline Technologies	49.83	2,040	2,087	406	444	10%	5.1	4.7	94	23%	109	25%	22.1	19.2	38.9	32.2
Fidessa	49.09	1,892	1,767	442	457	3%	4.0	3.9	97	22%	105	23%	18.3	16.8	38.4	36.0
IRESS	8.67	1,484	1,612	334	358	7%	4.8	4.5	91	27%	101	28%	17.7	16.0	27.0	23.8
Asseco Poland	10.41	864	2,480	2,323	2,414	4%	1.1	1.0	327	14%	302	13%	7.6	8.2	12.0	12.2
Model N	18.60	573	575	151	157	4%	3.8	3.7	9	6%	15	10%	nm	38.2	nm	88.6
Mean				\$ 1,637	\$ 1,781	13%	7.5 x	6.5 x	\$ 533	27%	\$ 591	27%	19.9 x	18.8 x	31.9 x	30.9 x
Median				476	536	9%	6.3	5.8	142	27%	175	28%	19.4	16.9	30.9	27.0
Human Capital Management																
Workday	\$ 121.12	\$ 26,933	\$ 26,827	\$ 2,701	\$ 3,314	23%	9.9 x	8.1 x	\$ 498	18%	\$ 675	20%	nm x	39.7 x	96.0 x	73.0 x
Ultimate Software	257.31	7,877	7,739	1,118	1,307	17%	6.9	5.9	277	25%	335	26%	28.0	23.1	46.9	39.0
Paycom Software	98.83	5,837	5,804	547	673	23%	10.6	8.6	223	41%	273	41%	26.0	21.2	39.5	32.2
Ceridian	33.19	4,653	5,749	733	788	7%	7.8	7.3	150	20%	176	22%	38.3	32.7	nm	64.7
Paylocity	58.86	3,217	3,087	411	501	22%	7.5	6.2	2	0%	2	0%	nm	nm	43.2	49.0
Cornerstone OnDemand	47.43	2,810	3,282	510	560	10%	6.4	5.9	91	18%	128	23%	36.0	25.6	67.2	42.1
Pluralsight	24.45	1,538	1,649	216	282	31%	7.6	5.8	(55)	nm	(43)	nm	nm	nm	nm	nm
Benefitfocus	33.60	1,074	1,142	255	286	12%	4.5	4.0	9	3%	21	7%	nm	nm	nm	nm
Mean				\$ 811	\$ 964	18%	7.7 x	6.5 x	\$ 149	18%	\$ 196	20%	32.1 x	28.5 x	58.6 x	50.0 x
Median				529	616	19%	7.6	6.0	121	18%	152	22%	32.0	25.6	46.9	45.6

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IT Operations Management																
VMware	\$ 146.97	\$ 59,871	\$ 51,477	\$ 8,788	\$ 9,494	8%	5.9 x	5.4 x	\$ 3,264	37%	\$ 3,484	37%	15.8 x	14.8 x	23.8 x	21.7 x
ServiceNow	172.47	30,836	31,260	2,599	3,344	29%	12.0	9.3	669	26%	929	28%	46.7	33.7	74.6	54.8
CA Technologies	35.65	14,871	14,386	4,265	4,319	1%	3.4	3.3	1,618	38%	1,660	38%	8.9	8.7	13.1	12.6
Splunk	99.11	14,427	13,548	1,647	2,056	25%	8.2	6.6	239	15%	339	17%	nm	39.9	93.8	64.8
New Relic	100.59	5,811	5,563	432	545	26%	12.9	10.2	45	11%	65	12%	nm	nm	nm	nm
LogMeIn	103.25	5,391	5,026	1,216	1,316	8%	4.1	3.8	446	37%	499	38%	11.3	10.1	19.6	17.1
Netscout Systems	29.70	2,384	2,536	969	1,033	7%	2.6	2.5	186	19%	225	22%	13.7	11.3	24.1	18.7
Apptio	36.20	1,581	1,586	229	267	17%	6.9	5.9	8	3%	16	6%	nm	nm	nm	nm
MobileIron	4.45	449	349	192	209	9%	1.8	1.7	(57)	nm	(57)	nm	nm	nm	nm	nm
Comarch SA	39.00	317	325	334	341	2%	1.0	1.0	43	13%	43	13%	7.5	7.5	21.2	17.4
Mean			\$ 2,067	\$ 2,292	13%	5.9 x	5.0 x	\$ 646	22%	\$ 720	23%	17.3 x	18.0 x	38.6 x	29.6 x	
Median			1,092	1,174	9%	5.0	4.6	213	19%	282	22%	12.5	11.3	23.8	18.7	
IT Security																
Palo Alto Networks	\$ 205.47	\$ 19,392	\$ 18,858	\$ 2,479	\$ 2,933	18%	7.6 x	6.4 x	\$ 634	26%	\$ 786	27%	29.8 x	24.0 x	47.1 x	38.4 x
Verisign	137.42	16,914	17,603	1,214	1,262	4%	14.5	13.9	859	71%	902	71%	20.5	19.5	30.1	26.7
Check Point	97.68	15,782	14,272	1,892	1,971	4%	7.5	7.2	1,022	54%	1,063	54%	14.0	13.4	17.4	16.1
Symantec	20.65	12,835	15,699	4,795	5,018	5%	3.3	3.1	2,107	44%	2,311	46%	7.5 x	6.8	13.1	12.0
Fortinet	62.43	10,602	9,298	1,729	1,952	13%	5.4	4.8	409	24%	492	25%	22.7	18.9	40.8	35.4
Trend Micro	52.46	7,228	5,877	1,340	1,435	7%	4.4	4.1	437	33%	467	33%	13.4	12.6	30.1	27.1
Okta	52.57	6,086	6,059	356	471	32%	17.0	12.9	(54)	nm	(28)	nm	nm	nm	nm	nm
Proofpoint	115.31	6,037	6,322	705	900	28%	9.0	7.0	91	13%	138	15%	nm	45.7	nm	71.6
Zscaler	35.75	4,465	4,178	212	280	32%	19.7	14.9	(9)	nm	5	2%	nm	nm	nm	nm
Sophos	8.12	3,824	4,010	704	796	13%	5.7	5.0	83	12%	113	14%	48.4	35.4	nm	62.4
Qualys	84.30	3,473	3,145	278	328	18%	11.3	9.6	101	36%	119	36%	31.2	26.4	57.6	48.9
FireEye	15.39	2,916	3,608	826	888	8%	4.4	4.1	105	13%	123	14%	34.4	29.3	nm	92.6
Mimecast	41.21	2,430	2,366	316	381	20%	7.5	6.2	42	13%	62	16%	nm	38.3	nm	90.0
CyberArk	62.96	2,270	1,945	318	376	18%	6.1	5.2	68	21%	83	22%	28.8	23.4	46.6	38.9
SailPoint	24.54	2,161	2,098	227	280	23%	9.2	7.5	18	8%	26	9%	nm	nm	nm	nm
Varonis Systems	74.50	2,142	1,988	267	316	18%	7.4	6.3	7	3%	17	5%	nm	nm	nm	nm
Carbon Black	26.00	1,917	1,884	204	251	23%	9.2	7.5	(55)	nm	(44)	nm	nm	nm	nm	nm
Imperva	48.25	1,680	1,301	371	426	15%	3.5	3.1	69	19%	86	20%	18.8	15.1	52.5	27.6
ForeScout Technologies	34.26	1,523	1,321	277	331	19%	4.8	4.0	(31)	nm	(7)	nm	nm	nm	nm	nm
Rapid7	28.22	1,363	1,234	234	280	20%	5.3	4.4	(18)	nm	10	3%	nm	nm	nm	nm
Secureworks	12.45	1,017	941	517	567	10%	1.8	1.7	(5)	nm	12	2%	nm	nm	nm	nm
OneSpan	19.65	785	618	206	232	13%	3.0	2.7	18	9%	30	13%	35.2	20.9	56.1	31.7
F-Secure	4.25	670	627	205	224	9%	3.1	2.8	21	10%	31	14%	29.4	20.3	64.4	36.9
ZixCorp	5.36	293	264	73	73	0%	3.6	3.6	21	29%	21	29%	12.4	12.4	16.2	16.2
Mean			\$ 823	\$ 916	15%	7.3 x	6.2 x	\$ 247	24%	\$ 284	22%	24.7 x	22.7 x	39.3 x	42.0 x	
Median			337	403	16%	5.9	5.1	55	20%	73	16%	25.8	20.6	43.7	36.2	

- Global Diversified
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- IT Security
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Notes:

[a] Wall Street consensus estimates

[b] EV / EBITDA multiples in excess of 50x or less than 0x and P / E multiples in excess of 100x or less than 0x are considered to be not meaningful

Sources: Company releases, Wall Street research

Public Equity Market Valuations

Equity Trading Multiples by Segment continued

(\$ millions)

Company	Share Price (06/30/18)	Market Value	Enterprise Value	Revenue [a]			EV / Revenue		EBITDA [a]				EV / EBITDA [b]		P / E Multiple [b]	
				CY18E	CY19E	y/y	CY18E	CY19E	CY18E	mgn	CY19E	mgn	CY18E	CY19E	CY18E	CY19E
Network Infrastructure																
Juniper Networks	\$ 27.42	\$ 9,574	\$ 8,779	\$ 4,767	\$ 4,909	3%	1.8 x	1.8 x	\$ 1,064	22%	\$ 1,124	23%	8.3 x	7.8 x	15.0 x	13.0 x
Presidio	13.10	1,242	2,102	2,917	3,049	5%	0.7	0.7	222	8%	244	8%	9.5	8.6	9.7	8.3
Extreme Networks	7.96	931	1,004	1,093	1,146	5%	0.9	0.9	147	13%	n/a	n/a	6.8	nm	9.4	6.8
			Mean	\$ 2,926	\$ 3,035	4%	1.2 x	1.1 x	\$ 477	14%	\$ 684	15%	8.2 x	8.2 x	11.4 x	9.4 x
			Median	2,917	3,049	5%	0.9	0.9	222	13%	684	15%	8.3	8.2	9.7	8.3
Platforms, Development Tools & Deployment																
Red Hat	\$ 134.37	\$ 23,833	\$ 22,484	\$ 3,275	\$ 3,785	16%	6.9 x	5.9 x	\$ 875	27%	\$ 1,054	28%	25.7 x	21.3 x	40.0 x	34.8 x
Atlassian	62.52	14,631	14,237	982	1,241	26%	14.5	11.5	264	27%	322	26%	nm	44.1	nm	82.2
Micro Focus	16.81	7,334	11,487	3,965	3,798	-4%	2.9	3.0	1,381	35%	1,512	40%	8.3	7.6	6.1	8.0
Pivotal Software	24.27	6,673	6,028	647	804	24%	9.3	7.5	(73)	nm	(27)	nm	nm	nm	nm	nm
Twilio	56.02	5,632	5,324	543	668	23%	9.8	8.0	13	2%	35	5%	nm	nm	nm	nm
Pegasystems	54.80	4,412	4,157	954	1,063	11%	4.4	3.9	137	14%	170	16%	30.4	24.4	46.8	39.0
MongoDB	49.63	2,753	2,482	220	295	34%	11.3	8.4	(70)	nm	(51)	nm	nm	nm	nm	nm
Appian	36.16	2,311	2,250	204	240	18%	11.0	9.4	(37)	nm	(28)	nm	nm	nm	nm	nm
Progress Software	38.82	1,769	1,744	404	407	1%	4.3	4.3	198	49%	190	47%	8.8	9.2	15.5	15.4
Hortonworks	18.22	1,471	1,381	331	407	23%	4.2	3.4	(55)	nm	(39)	nm	nm	nm	nm	nm
Bandwidth	37.98	775	727	194	219	13%	3.7	3.3	5	2%	(6)	nm	nm	nm	nm	nm
Axway Software	21.92	465	494	331	335	1%	1.5	1.5	38	11%	43	13%	13.0	11.4	18.8	16.2
Magic Software	8.30	406	385	289	308	7%	1.3	1.3	n/a	n/a	n/a	n/a	nm	nm	14.4	12.8
			Mean	\$ 949	\$ 1,044	15%	6.5 x	5.5 x	\$ 223	21%	\$ 265	25%	17.2 x	19.7 x	23.6 x	29.8 x
			Median	404	407	16%	4.4	4.3	26	21%	39	26%	13.0	16.4	17.1	16.2
Sales & Marketing Applications																
Hubspot	\$ 125.40	\$ 5,038	\$ 5,212	\$ 491	\$ 612	25%	10.6 x	8.5 x	\$ 45	9%	\$ 66	11%	nm x	nm x	nm x	nm x
Teradata	40.15	4,873	4,458	2,174	2,233	3%	2.1	2.0	371	17%	415	19%	12.0	10.8	28.5	23.4
Yext	19.34	2,073	1,949	226	298	32%	8.6	6.5	(36)	nm	(32)	nm	nm	nm	nm	nm
SendGrid	26.52	1,320	1,169	142	176	24%	8.3	6.6	16	11%	21	12%	nm	nm	nm	nm
Cardlytics	21.76	452	421	155	243	57%	2.7	1.7	(16)	nm	10	4%	nm	43.4	nm	nm
			Mean	\$ 638	\$ 712	28%	6.4 x	5.1 x	\$ 76	12%	\$ 96	11%	12.0 x	27.1 x	28.5 x	23.4 x
			Median	226	298	25%	8.3	6.5	16	11%	21	11%	nm	27.1	nm	nm
Storage Management																
NetApp	\$ 78.53	\$ 20,735	\$ 17,264	\$ 6,159	\$ 6,421	4%	2.8 x	2.7 x	\$ 1,431	23%	\$ 1,646	26%	12.1 x	10.5 x	20.1 x	17.3 x
Dropbox	32.42	13,163	12,487	1,357	1,582	17%	9.2	7.9	289	21%	341	22%	43.3	36.6	nm	82.5
Nutanix	51.57	8,802	8,876	1,220	1,506	23%	7.3	5.9	(15)	nm	145	10%	nm	nm	nm	nm
Pure Storage	23.88	6,052	5,959	1,359	1,712	26%	4.4	3.5	118	9%	203	12%	nm	29.4	nm	59.3
Box	24.99	3,670	3,543	606	735	21%	5.8	4.8	19	3%	46	6%	nm	nm	nm	nm
CommVault Systems	65.85	3,067	2,604	743	829	12%	3.5	3.1	99	13%	142	17%	26.2	18.4	50.5	35.1
Carbonite	34.90	1,014	1,290	307	345	12%	4.2	3.7	81	26%	94	27%	15.9	13.8	22.2	18.4
			Mean	\$ 1,679	\$ 1,876	17%	5.3 x	4.5 x	\$ 289	16%	\$ 374	17%	24.4 x	21.7 x	30.9 x	42.5 x
			Median	1,220	1,506	17%	4.4	3.7	99	17%	145	17%	21.1	18.4	22.2	35.1

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Notes:

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Sources: Company releases, Wall Street research

Public Equity Market Valuations

Equity Trading Multiples by Segment continued

(\$ millions)

Company	Share Price (06/30/18)	Market Value	Enterprise Value	Revenue [a]			EV / Revenue		EBITDA [a]				EV / EBITDA [b]		P / E Multiple [b]	
				CY18E	CY19E	y/y	CY18E	CY19E	CY18E	mgn	CY19E	mgn	CY18E	CY19E	CY18E	CY19E
Technical & Embedded Applications																
Dassault Systemes	\$ 135.60	\$ 35,047	\$ 32,776	\$ 3,848	\$ 4,205	9%	8.5 x	7.8 x	\$ 1,310	34%	\$ 1,464	35%	25.0 x	22.4 x	40.5 x	36.0 x
Autodesk	131.09	28,748	29,041	2,491	3,198	28%	11.7	9.1	364	15%	970	30%	nm	29.9	nm	41.0
ANSYS	174.18	14,864	13,974	1,230	1,351	10%	11.4	10.3	563	46%	616	46%	24.8	22.7	35.4	32.1
Synopsys	85.57	12,900	12,858	3,105	3,290	6%	4.1	3.9	765	25%	843	26%	16.8	15.2	23.2	20.2
Cadence Design	43.31	12,331	12,268	2,075	2,189	5%	5.9	5.6	670	32%	721	33%	18.3	17.0	26.8	24.4
Parametric Technology	93.81	10,852	11,173	1,280	1,432	12%	8.7	7.8	322	25%	410	29%	34.7	27.2	62.1	41.2
Aspen Technology	92.74	6,672	6,601	511	537	5%	12.9	12.3	245	48%	263	nm	27.0	25.1	37.3	33.7
			Mean	\$ 2,077	\$ 2,314	11%	9.0 x	8.1 x	\$ 605	32%	\$ 755	33%	24.4 x	22.8 x	37.6 x	32.7 x
			Median	2,075	2,189	9%	8.7	7.8	563	32%	721	32%	24.9	22.7	36.4	33.7
Vertical Applications																
Veeva	\$ 76.86	\$ 11,476	\$ 10,558	\$ 829	\$ 975	18%	12.7 x	10.8 x	\$ 277	33%	\$ 329	34%	38.1 x	32.1 x	56.1 x	48.2 x
Tyler Technologies	222.10	8,504	8,227	944	1,051	11%	8.7	7.8	280	30%	317	30%	29.4	25.9	46.4	40.9
Guidewire Software	88.78	7,126	6,736	705	834	18%	9.6	8.1	137	19%	181	22%	49.1	37.3	83.4	63.3
RealPage	55.10	5,037	5,930	865	971	12%	6.9	6.1	226	26%	271	28%	26.2	21.9	37.3	31.2
Blackbaud	102.45	4,859	5,302	880	963	9%	6.0	5.5	220	25%	245	25%	24.1	21.6	36.3	31.8
Appfolio	61.15	2,134	2,088	182	224	23%	11.5	9.3	41	22%	57	25%	nm	36.6	82.1	55.6
			Mean	\$ 734	\$ 836	15%	9.2 x	7.9 x	\$ 197	26%	\$ 233	27%	33.4 x	29.2 x	56.9 x	45.2 x
			Median	847	967	15%	9.1	8.0	223	26%	258	27%	29.4	29.0	51.3	44.6

Global Diversified

Application Delivery & Network Acceleration

Business Intelligence

Communications

Content Management

eCommerce & Supply Chain Management

ERP & General Business Applications

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Human Capital Management

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Sources: Company releases, Wall Street research

Public Equity Market Valuations

Equity Trading Multiples by Comparable Subset

(\$ millions)

Company	Share Price (06/30/18)	Market Value	Enterprise Value	Revenue [a]			EV / Revenue		EBITDA [a]				EV / EBITDA [b]		P / E Multiple [b]	
				CY18E	CY19E	y/y	CY18E	CY19E	CY18E	mgn	CY19E	mgn	CY18E	CY19E	CY18E	CY19E
Software-as-a-Service																
Salesforce.com	\$ 136.40	\$ 101,333	\$ 98,162	\$ 13,126	\$ 15,768	20%	7.5 x	6.2 x	\$ 2,986	23%	\$ 3,714	24%	32.9 x	26.4 x	59.1 x	50.4 x
ServiceNow	172.47	30,836	31,260	2,599	3,344	29%	12.0	9.3	669	26%	929	28%	46.7	33.7	74.6	54.8
Workday	121.12	26,933	26,827	2,701	3,314	23%	9.9	8.1	498	18%	675	20%	nm	39.7	96.0	73.0
Shopify	145.89	16,091	14,511	1,019	1,398	37%	14.2	10.4	39	4%	93	7%	nm	nm	nm	nm
Atlassian	62.52	14,631	14,237	982	1,241	26%	14.5	11.5	264	27%	322	26%	nm	44.1	nm	82.2
Splunk	99.11	14,427	13,548	1,647	2,056	25%	8.2	6.6	239	15%	339	17%	nm	39.9	93.8	64.8
Ultimate Software	257.31	7,877	7,739	1,118	1,307	17%	6.9	5.9	277	25%	335	26%	28.0	23.1	46.9	39.0
Pure Storage	23.88	6,052	5,959	1,359	1,712	26%	4.4	3.5	118	9%	203	12%	nm	29.4	nm	59.3
Paycom Software	98.83	5,837	5,804	547	673	23%	10.6	8.6	223	41%	273	41%	26.0	21.2	39.5	32.2
Zendesk	54.49	5,828	6,105	571	734	29%	10.7	8.3	39	7%	67	9%	nm	nm	nm	nm
RingCentral	70.35	5,818	6,080	643	792	23%	9.5	7.7	76	12%	99	13%	nm	nm	nm	89.5
New Relic	100.59	5,811	5,563	432	545	26%	12.9	10.2	45	11%	65	12%	nm	nm	nm	nm
Twilio	56.02	5,632	5,324	543	668	23%	9.8	8.0	13	2%	35	5%	nm	nm	nm	nm
LogMeIn	103.25	5,391	5,026	1,216	1,316	8%	4.1	3.8	446	37%	499	38%	11.3	10.1	19.6	17.1
Hubspot	125.40	5,038	5,212	491	612	25%	10.6	8.5	45	9%	66	11%	nm	nm	nm	nm
RealPage	55.10	5,037	5,930	865	971	12%	6.9	6.1	226	26%	271	28%	26.2	21.9	37.3	31.2
Box	24.99	3,670	3,543	606	735	21%	5.8	4.8	19	3%	46	6%	nm	nm	nm	nm
Paylocity	58.86	3,217	3,087	411	501	22%	7.5	6.2	2	0%	2	0%	nm	nm	43.2	49.0
Cornerstone OnDemand	47.43	2,810	3,282	510	560	10%	6.4	5.9	91	18%	128	23%	36.0	25.6	67.2	42.1
Envestnet	54.95	2,561	3,112	817	919	12%	3.8	3.4	153	19%	184	20%	20.4	16.9	30.3	25.1
Q2 Holdings	57.05	2,459	2,570	238	293	23%	10.8	8.8	(12)	nm	(12)	nm	nm	nm	nm	nm
Mimecast	41.21	2,430	2,366	316	381	20%	7.5	6.2	42	13%	62	16%	nm	38.3	nm	90.0
Varonis Systems	74.50	2,142	1,988	267	316	18%	7.4	6.3	7	3%	17	5%	nm	nm	nm	nm
Appfolio	61.15	2,134	2,088	182	224	23%	11.5	9.3	41	22%	57	25%	nm	36.6	82.1	55.6
Five9	34.57	1,994	1,961	238	277	17%	8.3	7.1	29	12%	40	14%	nm	49.4	nm	81.2
Talend	62.28	1,845	1,751	204	261	28%	8.6	6.7	(10)	nm	(0)	nm	nm	nm	nm	nm
Hortonworks	18.22	1,471	1,381	331	407	23%	4.2	3.4	(55)	nm	(39)	nm	nm	nm	nm	nm
Everbridge	47.42	1,391	1,445	139	175	26%	10.4	8.2	(3)	nm	3	2%	nm	nm	nm	nm
SPS Commerce	73.48	1,297	1,131	243	267	10%	4.7	4.2	44	18%	53	20%	25.6	21.4	51.2	44.2
Workiva	24.40	1,102	1,040	237	268	13%	4.4	3.9	(27)	nm	(19)	nm	nm	nm	nm	nm
Benefitfocus	33.60	1,074	1,142	255	286	12%	4.5	4.0	9	3%	21	7%	nm	nm	nm	nm
ChannelAdvisor	14.05	386	331	131	140	7%	2.5	2.4	8	6%	11	8%	41.2	31.1	nm	88.4
ZixCorp	5.36	293	264	73	73	0%	3.6	3.6	21	29%	21	29%	12.4	12.4	16.2	16.2
Mean				\$ 1,062	\$ 1,289	20%	8.0 x	6.6 x	\$ 199	16%	\$ 259	17%	27.9 x	29.0 x	54.1 x	54.3 x
Median				510	612	23%	7.5	6.3	42	14%	65	16%	26.2	27.9	49.1	52.6

Global Diversified

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Content Management

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Human Capital Management

IT Operations Management

IT Security

Network Infrastructure

Platforms, Dev Tools & Deployment

Sales & Marketing Applications

Storage Management

Technical & Embedded Apps

Vertical Applications

Software-as-a-Service

Small Cap

Highly Acquisitive

High Growth

High Profitability

Notes:

[a] Wall Street consensus estimates

[b] EV / EBITDA multiples in excess of 50x or less than 0x and P / E multiples in excess of 100x or less than 0x are considered to be not meaningful

Sources: Company releases, Wall Street research

Public Equity Market Valuations

Equity Trading Multiples by Comparable Subset continued

(\$ millions)

Company	Share Price (06/30/18)	Market Value	Enterprise Value	Revenue [a]			EV / Revenue		EBITDA [a]				EV / EBITDA [b]		P / E Multiple [b]	
				CY18E	CY19E	y/y	CY18E	CY19E	CY18E	mgn	CY19E	mgn	CY18E	CY19E	CY18E	CY19E
Small Cap (<\$250m Market Value)																
Attunity	\$ 11.61	\$ 241	\$ 212	\$ 77	\$ 90	17%	2.8 x	2.3 x	\$ 8	10%	\$ 10	11%	28.1 x	22.0 x	57.5 x	43.0 x
Asure Software	15.95	239	330	91	105	15%	3.6	3.2	21	23%	25	24%	16.0	13.3	21.2	16.9
Avid Technology	5.20	216	483	410	421	3%	1.2	1.1	41	10%	47	11%	11.9	10.3	64.2	21.7
Absolute Software	5.27	212	180	97	104	8%	1.9	1.7	10	11%	14	13%	17.5	13.3	49.7	39.5
Cyren	2.95	150	132	34	40	18%	3.9	3.3	n/a	n/a	n/a	n/a	nm	nm	nm	nm
The Rubicon Project	2.85	142	22	114	127	11%	0.2	0.2	(23)	nm	1	0%	nm	41.3	nm	nm
Datawatch	9.50	121	116	47	59	26%	2.5	2.0	(1)	nm	n/a	n/a	nm	nm	nm	47.2
NetSol Technologies	5.55	64	76	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	nm	nm	nm
Boxlight	5.11	53	54	33	41	25%	1.6	1.3	n/a	n/a	n/a	n/a	nm	nm	nm	nm
Marin Software	5.80	33	14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	nm	nm	nm
NexJ Systems	1.58	33	22	21	23	11%	1.0	0.9	(1)	nm	1	6%	nm	15.3	nm	nm
Determine	1.41	21	39	27	27	1%	1.4	1.4	(6)	nm	(3)	nm	nm	nm	nm	nm
Top Image Systems	1.03	19	23	32	n/a	n/a	0.7	n/a	n/a	n/a	n/a	n/a	nm	nm	nm	nm
FalconStor Software	0.10	10	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	nm	nm	nm
Tintri	0.25	8	45	104	117	12%	0.4	0.4	(26)	nm	(28)	nm	nm	nm	nm	nm
Mean				\$ 90	\$ 105	14%	1.8 x	1.6 x	\$ 2	13%	\$ 8	11%	18.4 x	19.2 x	48.1 x	33.7 x
Median				62	90	12%	1.5	1.4	(1)	10%	6	11%	16.8	14.3	53.6	39.5
Highly Acquisitive																
Danaher	\$ 98.68	\$ 69,381	\$ 78,917	\$ 19,920	\$ 20,859	5%	4.0 x	3.8 x	\$ 4,723	24%	\$ 5,100	24%	16.7 x	15.5 x	22.1 x	20.4 x
Roper Industries	275.91	28,768	33,023	5,018	5,378	7%	6.6	6.1	1,726	34%	1,887	35%	19.1	17.5	24.5	23.1
Constellation Software	774.86	16,420	16,343	3,082	3,496	13%	5.3	4.7	778	25%	908	26%	21.0	18.0	27.4	24.1
SS&C Technologies	51.90	12,795	14,708	3,402	4,183	23%	4.3	3.5	1,066	31%	1,394	33%	13.8	10.5	22.5	18.0
OpenText	35.19	9,412	11,476	2,836	2,848	0%	4.0	4.0	1,018	36%	1,083	38%	11.3	10.6	13.6	12.5
Micro Focus	16.81	7,334	11,487	3,965	3,798	-4%	2.9	3.0	1,381	35%	1,512	40%	8.3	7.6	6.1	8.0
j2 Global	86.61	4,274	5,350	1,230	1,326	8%	4.3	4.0	497	40%	557	42%	10.8	9.6	14.2	12.7
Descartes Systems	32.55	2,500	2,515	276	304	10%	9.1	8.3	94	34%	109	36%	26.7	23.2	27.4	24.3
Bottomline Technologies	49.83	2,040	2,087	406	444	10%	5.1	4.7	94	23%	109	25%	22.1	19.2	38.9	32.2
Enghouse Systems Ltd.	58.35	1,599	1,480	266	291	9%	5.6	5.1	78	29%	86	30%	18.9	17.2	34.0	30.4
Upland Software	34.37	753	881	137	148	8%	6.4	5.9	49	36%	54	37%	18.0	16.3	22.2	20.2
Asure Software	15.95	239	330	91	105	15%	3.6	3.2	21	23%	25	24%	16.0	13.3	21.2	16.9
Mean				\$ 3,386	\$ 3,598	9%	5.1 x	4.7 x	\$ 960	31%	\$ 1,069	32%	16.9 x	14.9 x	22.8 x	20.2 x
Median				2,033	2,087	8%	4.7	4.4	637	33%	733	34%	17.3	15.9	22.4	20.3

Global Diversified

Application Delivery & Network Acceleration

Business Intelligence

Communications

Content Management

eCommerce & Supply Chain Management

ERP & General Business Applications

Financial Applications

Human Capital Management

IT Operations Management

IT Security

Network Infrastructure

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Sources: Company releases, Wall Street research

Public Equity Market Valuations

Equity Trading Multiples by Comparable Subset continued

(\$ millions)

Company	Share Price (06/30/18)	Market Value	Enterprise Value	Revenue [a]			EV / Revenue		EBITDA [a]				EV / EBITDA [b]		P / E Multiple [b]	
				CY18E	CY19E	y/y	CY18E	CY19E	CY18E	mgn	CY19E	mgn	CY18E	CY19E	CY18E	CY19E
High Growth (>=25% CY19E Revenue Growth)																
Veritone	\$ 16.82	\$ 311	\$ 257	\$ 21	\$ 39	85%	12.1 x	6.5 x	\$ (40)	nm	\$ (36)	nm	nm x	nm x	nm x	nm x
Cardlytics	21.76	452	421	155	243	57%	2.7	1.7	(16)	nm	10	4%	nm	43.4	nm	nm
Smartsheet	25.97	2,750	2,706	161	225	40%	16.8	12.0	(50)	nm	(58)	nm	nm	nm	nm	nm
Shopify	145.89	16,091	14,511	1,019	1,398	37%	14.2	10.4	39	4%	93	7%	nm	nm	nm	nm
MongoDB	49.63	2,753	2,482	220	295	34%	11.3	8.4	(70)	nm	(51)	nm	nm	nm	nm	nm
Alteryx	38.16	2,416	2,237	186	245	32%	12.0	9.1	(11)	nm	(3)	nm	nm	nm	nm	nm
Okta	52.57	6,086	6,059	356	471	32%	17.0	12.9	(54)	nm	(28)	nm	nm	nm	nm	nm
Zscaler	35.75	4,465	4,178	212	280	32%	19.7	14.9	(9)	nm	5	2%	nm	nm	nm	nm
Yext	19.34	2,073	1,949	226	298	32%	8.6	6.5	(36)	nm	(32)	nm	nm	nm	nm	nm
Pluralsight	24.45	1,538	1,649	216	282	31%	7.6	5.8	(55)	nm	(43)	nm	nm	nm	nm	nm
Xero	32.41	4,480	4,422	347	451	30%	12.8	9.8	44	13%	83	18%	nm	nm	nm	nm
ServiceNow	172.47	30,836	31,260	2,599	3,344	29%	12.0	9.3	669	26%	929	28%	46.7	33.7	74.6	54.8
Zendesk	54.49	5,828	6,105	571	734	29%	10.7	8.3	39	7%	67	9%	nm	nm	nm	nm
Autodesk	131.09	28,748	29,041	2,491	3,198	28%	11.7	9.1	364	15%	970	30%	nm	29.9	nm	41.0
Talend	62.28	1,845	1,751	204	261	28%	8.6	6.7	(10)	nm	(0)	nm	nm	nm	nm	nm
Proofpoint	115.31	6,037	6,322	705	900	28%	9.0	7.0	91	13%	138	15%	nm	45.7	nm	71.6
Zuora	27.20	3,285	3,098	222	281	27%	14.0	11.0	(47)	nm	(39)	nm	nm	nm	nm	nm
Atlassian	62.52	14,631	14,237	982	1,241	26%	14.5	11.5	264	27%	322	26%	nm	44.1	nm	82.2
Datawatch	9.50	121	116	47	59	26%	2.5	2.0	(1)	nm	n/a	n/a	nm	nm	nm	47.2
New Relic	100.59	5,811	5,563	432	545	26%	12.9	10.2	45	11%	65	12%	nm	nm	nm	nm
Pure Storage	23.88	6,052	5,959	1,359	1,712	26%	4.4	3.5	118	9%	203	12%	nm	29.4	nm	59.3
Everbridge	47.42	1,391	1,445	139	175	26%	10.4	8.2	(3)	nm	3	2%	nm	nm	nm	nm
BlackLine	43.43	2,321	2,207	224	281	25%	9.8	7.9	11	5%	19	7%	nm	nm	nm	nm
Boxlight	5.11	53	54	33	41	25%	1.6	1.3	n/a	n/a	n/a	n/a	nm	nm	nm	nm
Splunk	99.11	14,427	13,548	1,647	2,056	25%	8.2	6.6	239	15%	339	17%	nm	39.9	93.8	64.8
Hubspot	125.40	5,038	5,212	491	612	25%	10.6	8.5	45	9%	66	11%	nm	nm	nm	nm
Mean			\$ 587	\$ 756	32%	10.6 x	8.1 x	\$ 63	13%	\$ 126	13%	46.7 x	38.0 x	84.2 x	60.1 x	
Median			225	297	28%	11.0	8.4	(1)	12%	14	12%	nm	39.9	84.2	59.3	

- Global Diversified
- Application Delivery & Network Acceleration
- Business Intelligence
- Communications
- Content Management
- eCommerce & Supply Chain Management
- ERP & General Business Applications
- Financial Applications
- Human Capital Management
- IT Operations Management
- IT Security
- Network Infrastructure
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Notes:

[a] Wall Street consensus estimates

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Sources: Company releases, Wall Street research

Public Equity Market Valuations

Equity Trading Multiples by Comparable Subset continued

(\$ millions)

Company	Share Price (06/30/18)	Market Value	Enterprise Value	Revenue [a]			EV / Revenue		EBITDA [a]				EV / EBITDA [b]		P / E Multiple [b]	
				CY18E	CY19E	y/y	CY18E	CY19E	CY18E	mgn	CY19E	mgn	CY18E	CY19E	CY18E	CY19E
High Profitability (>=35% CY18E EBITDA Margin)																
Verisign	\$ 137.42	\$ 16,914	\$ 17,603	\$ 1,214	\$ 1,262	4%	14.5 x	13.9 x	\$ 859	71%	\$ 902	71%	20.5 x	19.5 x	30.1 x	26.7 x
MSCI	165.43	14,736	15,965	1,439	1,570	9%	11.1	10.2	788	55%	878	56%	20.3	18.2	31.4	27.0
Check Point	97.68	15,782	14,272	1,892	1,971	4%	7.5	7.2	1,022	54%	1,063	54%	14.0	13.4	17.4	16.1
Progress Software	38.82	1,769	1,744	404	407	1%	4.3	4.3	198	49%	190	47%	8.8	9.2	15.5	15.4
Aspen Technology	92.74	6,672	6,601	511	537	5%	12.9	12.3	245	48%	263	49%	27.0	25.1	37.3	33.7
Oracle	44.06	178,224	172,238	40,238	41,794	4%	4.3	4.1	18,820	47%	19,619	47%	9.2	8.8	13.3	12.5
ANSYS	174.18	14,864	13,974	1,230	1,351	10%	11.4	10.3	563	46%	616	46%	24.8	22.7	35.4	32.1
Adobe	243.81	119,385	114,935	8,937	10,620	19%	12.9	10.8	3,976	44%	4,850	46%	28.9	23.7	36.1	31.7
Symantec	20.65	12,835	15,699	4,795	5,018	5%	3.3	3.1	2,107	44%	2,311	46%	7.5	6.8	13.1	12.0
Intel	49.71	231,649	256,687	68,298	70,057	3%	3.8	3.7	29,156	43%	30,843	44%	8.8	8.3	12.4	12.0
Microsoft	98.61	757,640	714,006	115,273	125,675	9%	6.2	5.7	47,928	42%	53,766	43%	14.9	13.3	24.8	23.1
Paycom Software	98.83	5,837	5,804	547	673	23%	10.6	8.6	223	41%	273	41%	26.0	21.2	39.5	32.2
j2 Global	86.61	4,274	5,350	1,230	1,326	8%	4.3	4.0	497	40%	557	42%	10.8	9.6	14.2	12.7
F5 Networks	172.45	10,539	9,515	2,177	2,235	3%	4.4	4.3	842	39%	905	40%	11.3	10.5	17.7	16.3
Akamai Technologies	73.23	12,508	13,034	2,709	2,950	9%	4.8	4.4	1,044	39%	1,167	40%	12.5	11.2	22.4	19.4
CA Technologies	35.65	14,871	14,386	4,265	4,319	1%	3.4	3.3	1,618	38%	1,660	38%	8.9	8.7	13.1	12.6
Temenos Group	156.00	10,806	11,061	847	948	12%	13.1	11.7	316	37%	364	38%	35.0	30.4	52.9	45.0
VMware	146.97	59,871	51,477	8,788	9,494	8%	5.9	5.4	3,264	37%	3,484	37%	15.8	14.8	23.8	21.7
Ebix	76.25	2,401	2,747	454	485	7%	6.1	5.7	168	37%	188	39%	16.3	14.6	20.2	17.6
Fiserv	74.09	30,891	35,113	5,853	6,118	5%	6.0	5.7	2,171	37%	2,261	37%	16.2	15.5	23.7	21.1
FIS	106.03	35,303	43,770	8,552	8,850	3%	5.1	4.9	3,147	37%	3,330	38%	13.9	13.1	20.3	18.2
LogMeIn	103.25	5,391	5,026	1,216	1,316	8%	4.1	3.8	446	37%	499	38%	11.3	10.1	19.6	17.1
Intuit	204.31	52,843	51,357	6,171	6,833	11%	8.3	7.5	2,241	36%	2,483	36%	22.9	20.7	36.2	30.2
Qualys	84.30	3,473	3,145	278	328	18%	11.3	9.6	101	36%	119	36%	31.2	26.4	57.6	48.9
OpenText	35.19	9,412	11,476	2,836	2,848	0%	4.0	4.0	1,018	36%	1,083	38%	11.3	10.6	13.6	12.5
Upland Software	34.37	753	881	137	148	8%	6.4 x	5.9 x	49	36%	54	37%	18.0	16.3	22.2	20.2
Cisco Systems	43.03	202,365	176,072	50,174	51,570	3%	3.5	3.4	17,561	35%	17,666	34%	10.0	10.0	15.7	14.2
Citrix Systems	104.84	14,208	16,277	2,908	3,005	3%	5.6	5.4	1,017	35%	951	32%	16.0	17.1	19.8	18.0
Micro Focus	16.81	7,334	11,487	3,965	3,798	-4%	2.9	3.0	1,381	35%	1,512	40%	8.3	7.6	6.1	8.0
Jack Henry	130.36	10,076	10,124	1,572	1,662	6%	6.4	6.1	544	35%	620	37%	18.6	16.3	33.9	30.8
Mean				\$ 11,630	\$ 12,306	7%	6.9 x	6.4 x	\$ 4,777	41%	\$ 5,149	42%	16.6 x	15.1 x	24.6 x	22.0 x
Median				2,443	2,542	5%	5.9	5.5	1,018	38%	1,007	40%	15.3	14.0	21.2	18.8

Global Diversified

Application Delivery & Network Acceleration

Business Intelligence

Communications

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eCommerce & Supply Chain Management

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Notes:

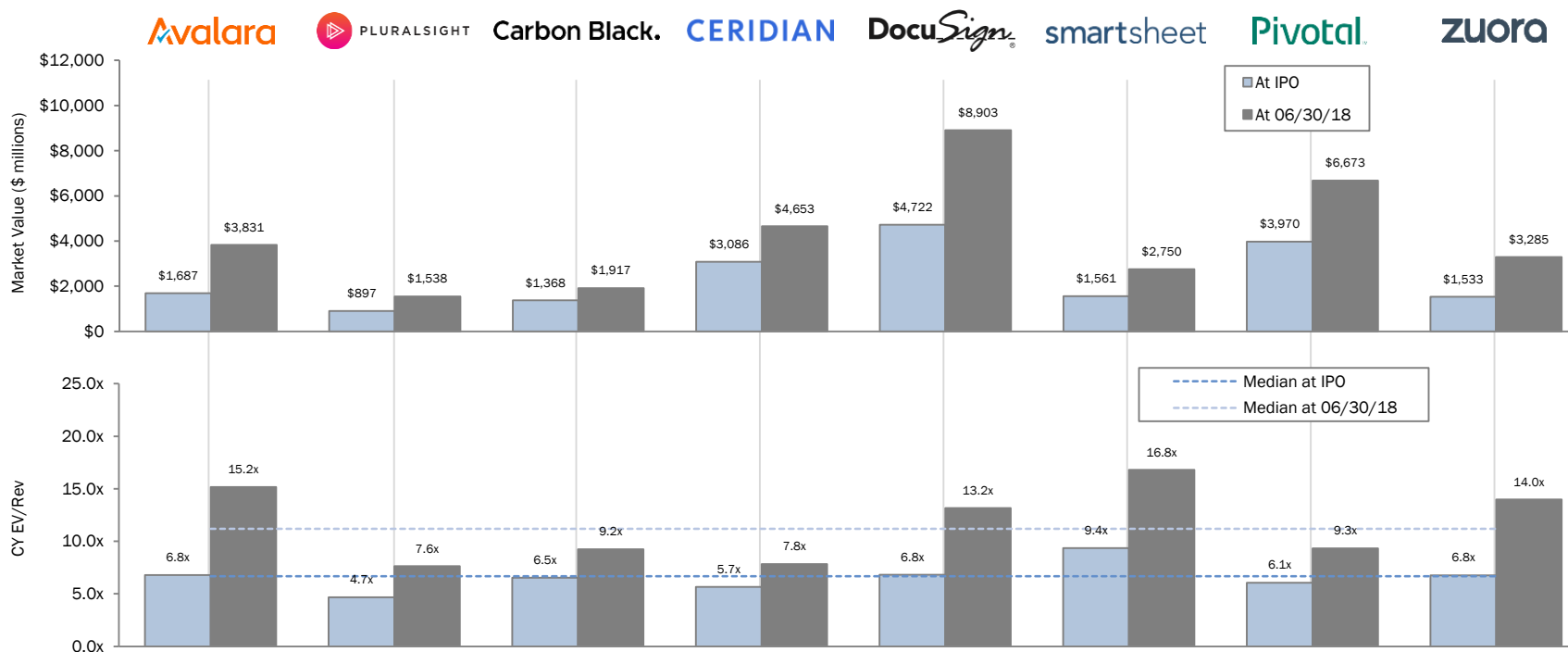
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Sources: Company releases, Wall Street research

Equity Financing Activity

Software IPOs: 2Q 2018



IPO Pricing

IPO Date	06/14/18	05/16/18	05/03/18	04/26/18	04/26/18	04/26/18	04/20/18	04/11/18
Original Range	\$19 - \$21	\$10 - \$12	\$15 - \$17	\$19 - \$21	\$24 - \$26	\$10 - \$12	\$14 - \$16	\$9 - \$11
Pricing	\$24.00	\$15.00	\$19.00	\$22.00	\$29.00	\$15.00	\$15.00	\$14.00
vs. Midpoint	20%	36%	19%	10%	16%	36%	0%	40%
Current	\$53.37	\$24.45	\$26.00	\$33.19	\$52.95	\$25.97	\$24.27	\$27.20
vs. Pricing	122%	63%	37%	51%	83%	73%	62%	94%

Operating Statistics at IPO (\$ millions)

CY Revenue	\$256	\$216	\$204	\$733	\$656	\$161	\$647	\$222
CY+1 Revenue	\$305	\$282	\$251	\$788	\$790	\$225	\$804	\$281
Growth	19%	31%	23%	7%	20%	40%	24%	27%

Sources: Company releases, Wall Street research

Equity Financing Activity

Software IPO Pricing & Performance Data

Initial Equity Issuances from 2016 – 2Q 2018 (\$ millions)

Company	Current Trading Data							Valuation at IPO						
	Share Price (06/30/18)	Market Value	Enterprise Value	EV / Revenue		Performance Since IPO	IPO Date	Share Price	Amount Raised [a]	Market Value	Enterprise Value	EV / Revenue		
				CY18E	CY19E							LTM	CY	CY +1
Avalara	\$ 53.37	\$ 3,831	\$ 3,875	15.2 x	12.7 x	122 %	06/14/18	\$ 24.00	\$ 180	\$ 1,687	\$ 1,732	7.7 x	6.8 x	5.7 x
Pluralsight	24.45	1,538	1,649	7.6	5.8	63	05/16/18	15.00	311	897	1,008	5.6	4.7	3.6
Carbon Black	26.00	1,917	1,884	9.2	7.5	37	05/03/18	19.00	152	1,368	1,335	7.6	6.5	5.3
Ceridian	33.19	4,653	5,749	7.8	7.3	51	04/26/18	22.00	462	3,086	4,144	5.4	5.7	5.3
DocuSign	52.95	8,903	8,633	13.2	10.9	83	04/26/18	29.00	629	4,722	4,465	8.6	6.8	5.7
Smartsheet	25.97	2,750	2,706	16.8	12.0	73	04/26/18	15.00	201	1,561	1,509	13.6	9.4	6.7
Pivotal Software	24.27	6,673	6,028	9.3	7.5	62	04/20/18	15.00	555	3,970	3,917	7.7	6.1	4.9
Zuora	27.20	3,285	3,098	14.0	11.0	94	04/11/18	14.00	154	1,533	1,501	8.9	6.8	5.3
Dropbox	32.42	13,163	12,487	9.2	7.9	54	03/22/18	21.00	563	8,240	8,019	7.2	5.9	5.1
Zscaler	35.75	4,465	4,178	19.7	14.9	123	03/15/18	16.00	192	1,877	1,806	11.7	8.5	6.4
Cardlytics	21.76	452	421	2.7	1.7	67	02/08/18	13.00	70	254	290	2.2	1.9	1.2
Boxlight	5.11	53	54	1.6	1.3	(27)	11/30/17	7.00	7	66	70	2.8	2.6	2.1
SailPoint	24.54	2,161	2,098	9.2	7.5	105	11/17/17	12.00	240	1,014	1,151	7.1	6.6	5.1
SendGrid	26.52	1,320	1,169	8.3	6.6	66	11/15/17	16.00	131	653	669	6.5	6.1	4.7
Bandwidth	37.98	775	727	3.7	3.3	90	11/10/17	20.00	80	352	388	2.4	2.4	2.0
ForeScout Technologies	34.26	1,523	1,321	4.8	4.0	56	10/27/17	22.00	116	814	768	3.8	3.5	2.8
MongoDB	49.63	2,753	2,482	11.3	8.4	107	10/19/17	24.00	192	1,175	1,134	9.1	7.5	5.2
Appian	36.16	2,311	2,250	11.0	9.4	201	05/25/17	12.00	75	704	689	5.1	4.1	3.4
Veritone	16.82	311	257	12.1	6.5	12	05/12/17	15.00	38	208	202	20.3	13.1	9.5
Cloudera	13.64	2,182	1,752	4.0	3.3	(9)	04/28/17	15.00	225	1,921	1,847	7.1	5.1	4.2
Yext	19.34	2,073	1,949	8.6	6.5	76	04/13/17	11.00	116	940	921	6.9	5.4	4.1
Okta	49.81	5,764	5,737	16.1	12.2	193	04/07/17	17.00	187	1,543	1,506	8.3	5.8	4.2
Alteryx	38.16	2,416	2,237	12.0	9.1	173	03/24/17	14.00	126	788	729	8.5	5.7	3.9
Presidio	13.10	1,242	2,102	0.7	0.7	(6)	03/10/17	14.00	233	1,241	1,891	0.7	0.7	0.6
BlackLine	43.43	2,321	2,207	9.8	7.9	155	10/28/16	17.00	146	839	808	7.2	6.6	4.6
Coupa Software	62.24	3,548	3,513	14.9	12.0	246	10/06/16	18.00	133	866	602	4.9	4.6	3.3
Nutanix	51.57	8,802	8,876	7.3	5.9	222	09/29/16	16.00	238	2,210	2,256	5.1	n/a	2.3
Apptio	36.20	1,581	1,586	6.9	5.9	126	09/22/16	16.00	96	611	527	3.7	3.3	2.8
Everbridge	47.42	1,391	1,445	10.4	8.2	295	09/15/16	12.00	75	323	310	4.6	4.1	3.0
Talend	62.28	1,845	1,751	8.6	6.7	246	07/28/16	18.00	95	503	409	4.6	3.9	2.8
Twilio	56.02	5,632	5,324	9.8	8.0	273	06/22/16	15.00	150	1,233	1,115	5.8	4.1	2.9
Secureworks	12.45	1,017	941	1.8	1.7	(11)	04/21/16	14.00	11	1,144	1,067	3.0	2.5	2.3
Mean				9.3 x	7.3 x	107 %			\$ 193	\$ 1,511	\$ 1,525	6.7 x	5.4 x	4.1 x
Median				9.2	7.5	86			151	1,079	1,091	6.7	5.7	4.1

Notes:

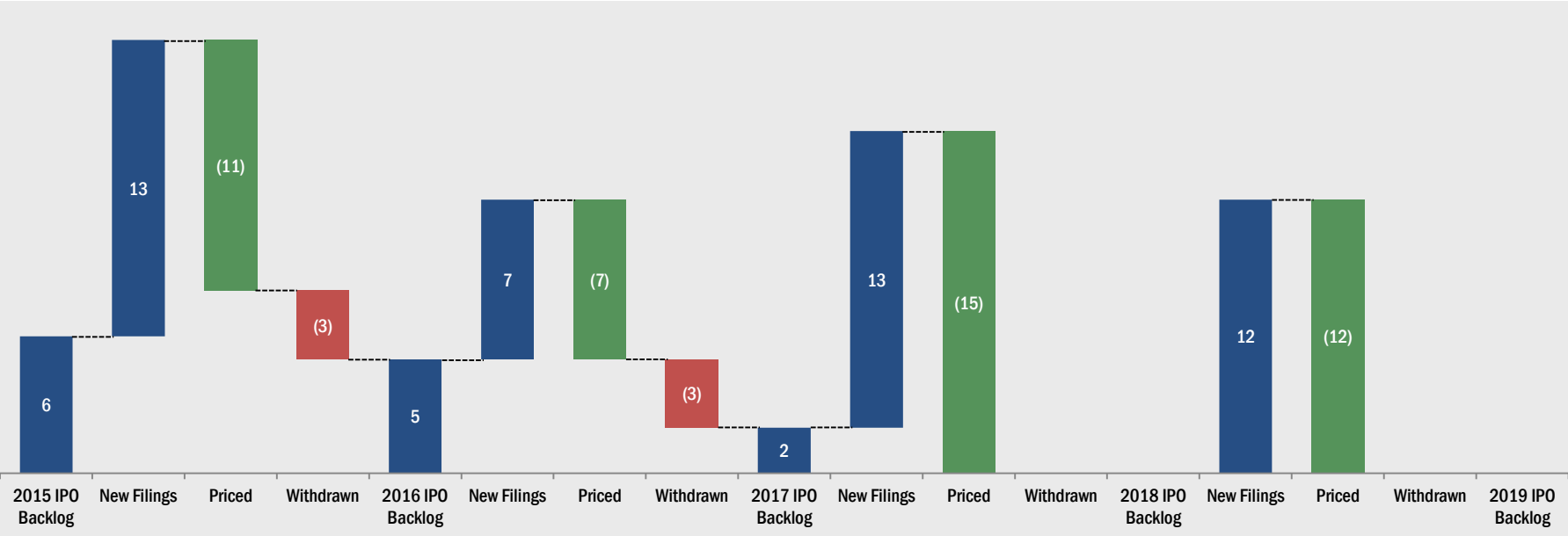
[a] Primary shares only

Sources: Company releases, Wall Street research

Equity Financing Activity

Software IPO Pipeline

Historical IPO Filing Trends



Note: In a typical IPO process, the offering progresses through three key milestones: the initial filing of the S-1 (prospectus; F-1 for foreign companies); an amended version of the S-1 following comments from the SEC; and pricing the offering and issuing shares to the public market

Equity Financing Activity

Software Private Capital Raise Activity: 2Q 2018

(\$ millions)

Close Date	Company	Participating Investor(s)	Clean Description	Amount
06/28/18	Cerebri AI	Leawood Venture Capital, M12, The University of Texas at Austin Endowment, WorldQuant Ventures	Customer success measurement	\$5
06/28/18	YOOBIC	Felix Capital, Insight Venture Partners	Retail operations monitoring	\$25
06/28/18	BitSight	GGV Capital, Menlo Ventures, Singtel Innov8, Warburg Pincus	Security rating and third-party risk management	\$60
06/28/18	Jask	Battery Ventures, Dell Technologies Capital, Kleiner Perkins Caufield & Byers, Ten Eleven Ventures, Vertical Venture Partners	Autonomous alert triage and threat analysis	\$25
06/28/18	Everlaw	Andreessen Horowitz, K9 Ventures, Menlo Ventures, Ulu Ventures	Litigation document analysis and collaboration	\$25
06/27/18	Preempt Security	ClearSky Security, General Catalyst, Intel Capital, The Blackstone Group	Enterprise security and threat prevention	\$18
06/27/18	Balbix	BV Jagadeesh, Mayfield Fund, Mubadala Investment Company, Singtel Innov8	Breach control and real-time risk prediction	\$20
06/27/18	CodeFresh	Citadel, Hillsven, M12, Streamlined Ventures, UpWest Labs, Viola Ventures	Container and microservices delivery and collaboration	\$8
06/27/18	CloudBees	Delta-v Capital, Lightspeed Venture Partners, Matrix Partners, Unusual Ventures, Verizon Ventures	Continuous software delivery	\$62
06/27/18	Puppet Labs	Cisco Investments, EDBI, Kleiner Perkins Caufield & Byers, True Ventures, VMware	Software delivery and operation automation	\$42
06/27/18	Cordial	High Alpha, PeakSpan Capital, Upfront Ventures	Email marketing and customer interaction	\$15
06/27/18	Cynet	Ibex Investors, Norwest Venture Partners, Shlomo Kramer	Threat detection, analysis and remediation	\$13
06/27/18	Signal Media	Frontline Ventures, GMG Ventures, Hearst Ventures, LocalGlobe, MMC Ventures, REV Venture Partners	Reputation management and decision support	\$16
06/27/18	Cyabra	TAU Ventures	Social media disinformation threat protection	\$1
06/27/18	AcadiaSoft	London Stock Exchange Group	Collateral management and workflow automation	\$25
06/27/18	Social SafeGuard	AllegisCyber, NightDragon Security, Salesforce Ventures	Risk assessment and threat prevention	\$11
06/27/18	Deck Commerce	Arsenal Capital Management	Ecommerce operation management	\$3
06/26/18	Triptease	BGF Ventures, Notion	Online hotel booking and conversion optimization	\$4
06/26/18	Noodle.ai	Dell Technologies Capital, TPG Growth	Business operation analytics	\$35
06/26/18	Celonis	83North, Accel	Business process analytics and visualization	\$50
06/26/18	Catalog	AME Cloud, Data Collective, Day One, Green Bay, Industry Ventures, LINE, New Enterprise Associates, OS Fund	Data conversion and storage	\$9
06/26/18	Jama Software	Insight Venture Partners, Madrona Venture Group	Product development optimization	\$200
06/26/18	CashShield	GGV Capital, Temasek Holdings, Wavemaker Partners	Online fraud prevention	\$20
06/26/18	Apollo	Nexus Venture Partners, Social Capital, Y Combinator	Sales force integration platform	\$7
06/26/18	Optii Keeper	HOF Capital, Kinetic Ventures, NextGen Venture Partners, Select Venture Partners, Thayer Ventures	Hotel housekeeping and labor management	\$4
06/26/18	LeaseAccelerator	Insight Venture Partners	Enterprise lease accounting	\$30
06/25/18	QxBranh	Alpha Intelligence Capital, Dymon Asia Ventures, Maryland Venture Fund, Summer Capital, WorldQuant Ventures	Data analysis and quantum computing	\$8
06/25/18	Tact.ai	Accel, Amazon Alexa Fund, Comcast Ventures, M12, Redpoint Ventures, Salesforce Ventures, Subrah Iyar, Upfront Ventures	Sales experience optimization	\$27
06/25/18	BigID	Boldstart Ventures, ClearSky Security, Comcast Ventures, Information Venture Partners, SAP, Scale Venture Partners	Data protection and privacy management	\$30
06/25/18	Integrate.com	Alumni Ventures Group, Forté Ventures, Foundry Group, High Alpha, Iron Gate Capital, Liberty Global Ventures	Closed-loop demand marketing integration	\$23
06/21/18	Agari	Alloy, Battery, First Round, Goldman Sachs Merchant Banking, Greyclock, Norwest Venture, Scale Venture	Email data security	\$40
06/21/18	CloudBolt Software	Insight Venture Partners	Computing resources control	\$23
06/21/18	Cape Analytics	Cincinnati Insurance, CSAA, Data Collective, Formation 8, Khosla, Lux, Montage, Nephila, Promus, State Auto, Hartford, XL Innovate	Property data feed and analytics	\$17
06/21/18	IntSights	Blumberg Capital, ClearSky Security, Gilot Capital Partners, The Blackstone Group, Tola Capital, Wipro Ventures	Cyberthreat intelligence and incident mitigation	\$17
06/20/18	Immuta	Citi Ventures, Dell Technologies Capital, DFJ Growth, Drive Capital, Greycroft	Data management and collaboration	\$20
06/20/18	Nginx	Goldman Sachs Merchant Banking Division, New Enterprise Associates	Open source web architecture management	\$43
06/20/18	Beamery	AngelPad, Edenred Capital Partners, EQT, Index Ventures, M12	Candidate relationship analytics	\$28
06/20/18	Hired	Investment Management Corporation of Ontario	Technology market recruitment	\$30
06/20/18	Orway	Founder Collective, Lerer Hippeau Ventures, Middleland Capital, Revolution	Revenue automation and billing and finance management	\$3
06/20/18	Silexica	DSA Invest, EQT Ventures, Merus Capital, Paua Ventures, Seed Fonds Aachen	Software design automation	\$18

Sources: Company releases, Wall Street research

Equity Financing Activity

Software Private Capital Raise Activity: 2Q 2018 continued

(\$ millions)

Close Date	Company	Participating Investor(s)	Clean Description	Amount
06/20/18	Seal	Toba Capital	Contract discovery, data extraction and analytics	\$30
06/20/18	Roambee	MDI Ventures	IoT smart logistics and asset management	\$2
06/20/18	Inky	Blackstone Ventures, ClearSky Security, Gula Tech Adventures	Anti-phishing and email anomaly detection	\$6
06/20/18	Universe	Advancit Capital, BoxGroup, Eniac Ventures, Entrée Capital, FUEL, General Catalyst, Javelin, Product Co-Op, Sinai, Y Combinator	Mobile website builder	\$4
06/20/18	Stensul	Arthur Ventures, First Round Capital, Javelin Venture Partners, Lowercase Capital, Uncork Capital	Responsive email marketing	\$7
06/19/18	Cylance	SharesPost, The Blackstone Group	Malware detection and threat prevention	\$120
06/19/18	Falkonry	Basis Set Ventures, Fortive, Polaris Partners, Presidio Ventures, Start Smart Labs, Zetta Venture Partners	Industrial monitoring and pattern recognition	\$5
06/19/18	Talentry	Allgeier, Global Founders Capital, Nauta Capital	Social recruitment and talent marketing	\$7
06/19/18	Veriff	Ace Ventures, Mosaic Ventures, Superangel, SV Angel	Web-based identity verification	\$8
06/19/18	Crate.io	Deutsche Invest Equity Partners, Draper Esprit, Momenta Partners, Vito Ventures, Zetta Venture	IoT and machine data analytics	\$11
06/19/18	CrowdStrike	Accel, CapitalG, General Atlantic, IVP, March Capital Partners	Cyber security and threat prevention	\$200
06/19/18	Convey	NextGen Venture Partners, RPM Ventures, Silverton Partners, Techstars	Customer delivery supply chain management	\$10
06/19/18	Bevy	Upfront Ventures	Community event creation and management	\$6
06/19/18	Jjumpp	Arthur Ventures	Online presence and reputation management	\$3
06/18/18	Tessian	Accel, Amadeus Capital Partners, Balderton Capital, Crane Ventures Partners, LocalGlobe, Walking Ventures, Winton Ventures	Email data loss detection and prevention	\$12
06/18/18	Panaseer	Albion Capital, Cisco Investments, Evolution Equity Partners, Notion, Paladin Capital Group, Winton Capital Management	Enterprise asset security analytics	\$10
06/18/18	Acumatica	Accel-KKR	SMB ERP applications	\$25
06/18/18	Staffbase	Capnamic Ventures, e.ventures, Kizoo Technology Ventures	Employee communication platform	\$10
06/17/18	RocketVisor	Beta Bridge, Converge, Fitz Gate, General Catalyst, Rough Draft Ventures, Sinai Ventures, Tectonic, The Graduate Syndicate	Enterprise workflow simplification	\$3
06/15/18	Kustomer	Boldstart Ventures, Canaan Partners, Cisco Investments, Redpoint Ventures	Customer relationship management platform	\$26
06/15/18	CHEQ	Battery Ventures	Intrusive advertisement detection and elimination	\$5
06/14/18	PatSnap	Qualgro, Sequoia Capital, Shunwei Capital	Intellectual property analytics and management	\$38
06/14/18	Pipedrive	Atomico, Bessemer Venture Partners, Insight Venture Partners, Rembrandt Venture Partners	Sales process management and CRM	\$50
06/14/18	Reonomy	Bain Capital Ventures, Sapphire Ventures, SoftBank Capital	Commercial real estate data and analytics	\$30
06/14/18	YotaScale	n/a	Cloud computing performance management	\$8
06/13/18	Orchid Software	Maven Capital Partners, Northstar Ventures	Intranet communication and collaboration	\$3
06/13/18	SmartCAT	n/a	Translation process automation	\$7
06/12/18	Cappitech	83North	Financial compliance and regulation monitoring	\$4
06/12/18	Zentera Systems	n/a	Hybrid cloud computing platform	\$5
06/11/18	Cohesity	Battery, Cisco, Hewlett Packard Enterprise, Morgan Stanley Expansion Capital, Sequoia, SoftBank, Trinity Ventures, Wing Venture	Secondary storage data consolidation	\$250
06/11/18	Claroty	Aster Capital, Bessemer, Envision, Innovation Endeavors, Israel Cleantech, Next47, Rockwell Automation, Team8, Tekfen, Temasek	Network assets and communication pattern monitoring	\$60
06/11/18	Eigen Technologies	Goldman Sachs Principal Strategic Investments, Temasek Holdings	Natural language processing and document reading	\$18
06/11/18	Aptible	Base Ventures, Fresh VC, Lux Capital, Maverick Ventures, Palm Drive Capital, QueensBridge Venture Partners	Security management and DevOps tools	\$12
06/11/18	Ambition Solutions	n/a	Sales management and performance analytics	\$6
06/11/18	FairWarning	Mainsail Partners	Data protection and application governance	\$60
06/11/18	Resin.io	Aspect Ventures, Draper Fisher Jurvetson Management, GE Ventures, KDDI, Soracom	Linux-based DevOps management	\$5
06/11/18	Silverfort	Singtel Innov8, StageOne Ventures, TLV Partners	Authentication and threat prevention	\$12
06/08/18	UpdatePromise.com	GCP Capital Partners	Consumer experience lifecycle monitoring	\$8
06/07/18	Bedrock Analytics	Cervin Ventures, Illuminate Ventures	Sales data analytics and visualization	\$7
06/07/18	Podium	Accel, GV, IVP, Summit Partners, Y Combinator	Customer review management	\$60

Sources: Company releases, Wall Street research

Equity Financing Activity

Software Private Capital Raise Activity: 2Q 2018 continued

(\$ millions)

Close Date	Company	Participating Investor(s)	Clean Description	Amount
06/07/18	Devo	Insight Venture Partners, Kibo Ventures Partners	Big data analytics	\$25
06/07/18	Homebase	Bain Capital Ventures, Baseline Ventures, Cowboy Ventures, Khosla Ventures	Employee timesheet and schedule tracking	\$20
06/06/18	Focal	Bee Partners, Hyperplane Venture Capital	Web-based image analytics and automation	\$1
06/06/18	Avi Networks	Cisco Investments, DAG Ventures, Greyllock Partners, Lightspeed Venture Partners, Menlo Ventures	Application delivery platform	\$60
06/06/18	Energy Technology	n/a	Smart grid management	\$2
06/06/18	Qumulo	BlackRock, Goldman Sachs, Highland Capital, Kleiner Perkins Caufield & Byers, Madrona, Valhalla Partners, Western Digital	Enterprise data storage	\$93
06/06/18	SkySync	n/a	Enterprise content integration and storage	\$3
06/05/18	OneLogin	Blue Cloud Ventures, Charles River Ventures, Scale Venture Partners, Social Capital	Identity and access management	\$23
06/05/18	OutSystems	Goldman Sachs Private Capital Investing Group, Kohlberg Kravis Roberts	Application development and delivery	\$360
06/05/18	Panorays	Aleph, Elevator Fund	Automated third-party security management	\$5
06/04/18	DocAuthority	2B Angels, Differential Ventures, ff Venture Capital, Greycroft, PLUS Ventures, Raine Ventures	Document management and protection	\$10
06/04/18	System	Hearst Ventures, Underscore VC	Wholesale distribution operations management	\$8
06/04/18	Innoactive	Capnamic Ventures, Unternehmertum Venture Capital Partners	VR collaboration and deployment	\$5
06/04/18	Eze Castle Integration	H.I.G. Capital	Investment management cyber security	\$115
06/04/18	Dataminr	n/a	Real-time data discovery and alerting	\$221
06/04/18	Urbit	n/a	Network operating system and virtual computer	\$1
06/01/18	Raken	Eniac Ventures, Rincon Venture Partners, Spider Capital, Tao Capital Partners, US Venture Partners	Daily reporting and field management	\$10
05/31/18	Honest Buildings	Altus, Bienville, Borealis, C-III, Circle, DivcoWest, First, GreenSoil, Navitas, QuadReal, RiverPark, RockPort, Rudin, Durst, Westly, Thrive	Urban project management and procurement	\$30
05/31/18	Kneron	Horizons Ventures	Application-specific integrated circuit and software	\$18
05/31/18	Virtru	Bessemer Venture Partners, Blue Delta, ICONIQ Capital, New Enterprise, Samsung NEXT, Soros Fund, Thyra Global	Email encryption and data protection	\$38
05/31/18	AirPR	n/a	Content marketing and public relations analytics	\$6
05/31/18	CyberInt Technologies	Viola Growth	Cybersecurity detection and response	\$18
05/31/18	Broker Genius	n/a	Real-time pricing automation	\$2
05/31/18	Weights & Biases	Bloomberg Beta, Trinity Ventures	Machine learning application development tools	\$5
05/31/18	Blackwood Seven	Cipio Partners, Conor Venture Partners, Jolt Capital, Sunstone Technology Ventures, Vækstfonden	Media analytics and predictive sales modeling	\$20
05/31/18	Cogniteev	AQUITI Gestion, IRDI-ICSO	Web-based big data and semantic search	\$4
05/30/18	SQream	Alibaba, Glory Ventures, Hanaco, Paradiso Ventures, Silvertch Ventures, Sistema Venture Capital, World Trade Ventures	Big data analytics SQL database	\$26
05/30/18	Influential	Capital Zed, Europlay Capital Advisors, Paradigm Talent Agency, ROAR, Tech Coast Angels, William Morris Endeavor Entertainment	Influencer-based marketing	\$12
05/29/18	SocialChorus	Arrowroot Capital, Kohlberg Ventures, Western Technology Investment	Workforce communication and engagement	\$13
05/29/18	QuantCube Technology	CDC International Capital, Kingdom Holding Company, Moody's	Macroeconomic and financial data predictive analytics	\$5
05/29/18	Blackpoint	Delphi Capital, Maryland Venture Fund, Telcom Ventures	Lateral spread detection and network visualization	\$6
05/29/18	CoreView	Insight Venture Partners	Office 365 management, reporting and monitoring	\$20
05/29/18	Signifyd	AllegisCyber, American Express Ventures, Bain Capital Ventures, IA Ventures, Menlo Ventures, Premji Invest, Resolute Ventures	Ecommerce fraud protection	\$100
05/29/18	SafeToNet	West Hill Capital	Cyber safety and online risk prevention	\$13
05/29/18	ObserveAI	Emergent Ventures, Nexus Venture Partners	Customer conversation analytics and quality assurance	\$8
05/24/18	Phenom People	AXA Venture Partners, Omidyar Technology Ventures, Sierra Ventures, Sigma Prime Ventures	Talent relationship marketing	\$22
05/24/18	Reltio	.406 Ventures, Crosslink Capital, New Enterprise Associates, Sapphire Ventures	Master data management and analytics	\$45
05/24/18	Abstract	Amplify Partners, Cowboy Ventures, Scale Venture Partners	Application development version control and collaboration	\$16
05/24/18	Conga	Insight Venture Partners, Salesforce Ventures	Intelligent document automation	\$47
05/24/18	MarketDial	Crosslink Capital, Kickstart Seed Fund, Peterson Partners	A/B testing	\$6

Sources: Company releases, Wall Street research

Equity Financing Activity

Software Private Capital Raise Activity: 2Q 2018 continued

(\$ millions)

Close Date	Company	Participating Investor(s)	Clean Description	Amount
05/24/18	Waggl	First Analysis, FundersClub, Labora	Employee engagement and feedback listening	\$7
05/24/18	Infusionsoft	GSD Capital, Kickstart Seed Fund	Email marketing and sales platform	\$8
05/23/18	Particle	Cito Ventures, Qualcomm Ventures, Spark Capital	IoT connected device management	\$33
05/23/18	Platform.sh	Benhamou Global Ventures, Hi Inov, IdInvest Partners, Partech Partners, SNCF Digital Ventures	Container-based cloud hosting	\$34
05/23/18	Exterro	Leeds Equity Partners	E-discovery and information governance	\$100
05/23/18	First Leads	Math Venture Partners, Nine Four Ventures	Real estate sales lead generation	\$5
05/22/18	ValiMail	Bloomberg Beta, Flybridge Capital Partners, Shasta Ventures, Tenaya Capital	Email security and authentication	\$25
05/22/18	SignalFx	Andreessen Horowitz, Charles River Ventures, General Catalyst	Cloud monitoring and alerting	\$45
05/22/18	Okeru	Bessemer Venture Partners, Capital One Growth Ventures, Felicis Ventures, Nexus Venture Partners	Data access and governance	\$12
05/22/18	365Talents	Alliance Entreprendre, Axeleo, Cr�dit Agricole Cr�ation, Kreaxi, Ventech	Skills and staffing management	\$3
05/22/18	Indeni	Caremi Partners, RTP Ventures, Sequoia Capital Israel, State Of Mind Ventures	Crowd-sourced network automation	\$14
05/21/18	Pavilion Data	Artiman Ventures, DAG Ventures, Kleiner Perkins Caufield & Byers, Korea Investment Partners, SKTA Innopartners	Data storage system	\$12
05/21/18	SafetyCulture	Blackbird Ventures, Index Ventures, Morpheus Ventures, Tiger Global Management	Mobile inspection forms and safety-auditing	\$45
05/21/18	Outreach	DFJ Growth, Four Rivers Group, M12, Mayfield Fund, MHS Capital, Sapphire Ventures, Spark Capitalx Clayton, Trinity Ventures	Customer engagement and sales automation	\$65
05/18/18	FiscalNote	Plug and Play Tech Center	Open data aggregation and forecasting	\$10
05/18/18	VantIQ	n/a	Collaborative application productive platform	\$5
05/18/18	Coman Software	bmp Ventures	Visual machine and plant construction management	\$1
05/17/18	Mobilewalla	ATW Partners, GCP Capital Partners, Madrona Venture Group	Consumer intelligence and mobile marketing	\$13
05/17/18	Tray.io	AngelPad, GGV Capital, Mosaic Ventures, True Ventures	Cloud data integration platform	\$14
05/16/18	Canopy Tax	EPIC Ventures, New Enterprise Associates, Nyca Partners, Pelion, Tenaya Capital, University Growth Fund, Wells Fargo	Tax resolution workflow management	\$42
05/16/18	dashdash	Accel, Atlantic Labs, Cherry Ventures Management	Interactive web application creation	\$8
05/16/18	Cloudvirga	Riverwood Capital, Skyline Home Loans, Upfront Ventures	Mortgage workflow management	\$50
05/16/18	Aircall	Balderton Capital, Draper Esprit, eFounders, Newfund, Next World Capital	Call center software	\$29
05/16/18	Mynd	Canaan Partners, Jackson Square Ventures, Lightspeed Venture Partners, ThirdStream Partners	Property management platform	\$25
05/16/18	InsightSquared	Accomplice VC, Draper Fisher Jurvetson Management, NextView Ventures, Tola Capital, Two Sigma Ventures	Sales performance analytics	\$23
05/16/18	Cuebiq	DRW, Goldman Sachs Principal Strategic Investments, Nasdaq Ventures, TCom Capital, Tribeca Angels, Tribeca Venture Partners	Location intelligence and measurement	\$33
05/16/18	Sococo	n/a	Remote workplace platform	\$2
05/16/18	ESUB Construction Software	Autodesk, Revolution	Construction project management and collaboration	\$3
05/15/18	ConveyIQ	n/a	Video interviewing and talent communication	\$1
05/15/18	PhishLabs	Alerion Ventures, LLR Partners	Cybercrime protection and intelligence	\$21
05/15/18	Welcome to the Jungle	Bpifrance, Kima Ventures, XAnge Private Equity	Job application and talent hiring	\$8
05/15/18	Beautiful.AI	First Round Capital, Shasta Ventures, Trinity Ventures	Visual document design and presentation	\$11
05/15/18	#paid	Aitken Investment Management, Freycinet Ventures, ScaleUP Venture Partners	Influencer marketing and content platform	\$9
05/15/18	Antuit	The Goldman Sachs Group, Zodiuss Capital	Data engineering and analytics	\$15
05/15/18	Auth0	Bessemer Venture Partners, K9 Ventures, Meritech Capital Partners, Sapphire Ventures, Trinity Ventures, WIL	Identity management and authentication	\$55
05/15/18	Tanium	TPG Growth	Endpoint security and systems management	\$175
05/15/18	Springrole	AlphaBlock Investments, BlockWater, Distributed Network Advisors, Wavemaker Genesis	Block-chain based recruitment platform	\$1
05/15/18	Gravity Supply Chain	Wavemaker Partners	Real-time supply chain management and logistics	\$7
05/14/18	128 Technology	G20 Ventures	Advanced secure networking platform	\$31
05/14/18	Firepoint	n/a	Real estate customer relationship management	\$2

Sources: Company releases, Wall Street research

Equity Financing Activity

Software Private Capital Raise Activity: 2Q 2018 continued

(\$ millions)

Close Date	Company	Participating Investor(s)	Clean Description	Amount
05/14/18	Corrata	Clariet, Delta Partners, Enterprise Ireland	Mobile security and data usage control	\$2
05/11/18	Red Canary	n/a	Endpoint security and cyber threat detection	\$6
05/11/18	P97	FleetCor Technologies	Mobile commerce and behavioral marketing	\$15
05/11/18	Plethora	Dolby Family Ventures	Manufacturing workflow feedback and optimization	\$9
05/11/18	Beacon Platform	Pacific Investment Management Company, Sand Hill East	Financial and quantitative application development	\$19
05/11/18	Teamable	n/a	Referral-based employee recruitment	\$2
05/10/18	conDati	The Entrepreneurs Fund	Enterprise marketing data analytics	\$5
05/10/18	Scalyr	n/a	Log management and server monitoring	\$6
05/10/18	SyncHR	n/a	HR, benefits and payroll process automation	\$5
05/09/18	7Park Data	n/a	Anonymized user data analytics	\$6
05/09/18	ClickFox	Arrowroot Capital, Ascent Venture Partners, Veritas Venture Partners	Customer journey analytics	\$38
05/09/18	Keyedin Solutions	Arrowroot Capital	PPM and professional services automation	\$15
05/09/18	Fuse Universal	Eight Roads Ventures	Social learning, knowledge and communication	\$20
05/09/18	At-Bay	Khosla Ventures, Lightspeed Venture Partners Israel	Cyber risk management and insurance	\$13
05/09/18	Fuze	Bessemer Venture Partners, Summit Partners	Unified communications and video conferencing	\$150
05/09/18	LookingGlass Cyber	n/a	Cyberthreat monitoring and management	\$10
05/09/18	Starmind	Digital+ Partners	Artificial intelligence and cognitive computing	\$15
05/08/18	Red Points	Eight Roads Ventures, Mangrove Capital Partners, Northzone Ventures, Sabadell Venture Capital	Enterprise brand and content protection	\$24
05/08/18	SafeBreach	Deutsche Telekom Capital Partners, Draper Nexus, Hewlett Packard Pathfinder, Paypal, Sequoia Capital Israel	Security breach simulation and identification	\$15
05/08/18	Peltarion	EQT Ventures, Foundation Asset Management	Deep learning system development platform	\$13
05/08/18	ERP Maestro	AdvancedStage Capital, Aspen Capital	Access control, security auditing and risk reporting	\$12
05/08/18	Zembula	Portland Seed Fund	Traffic and customer engagement monitoring	\$3
05/07/18	Squelch	Correlation Ventures, Shasta Ventures	Enterprise data intelligence and analytics	\$9
05/07/18	Mesosphere	Andreessen, Disruptive, FUEL, HP, Khosla, Koch, Qatar Investment, SV Angel, T. Rowe Price, Triangle Peak, Two Sigma, Zhongwei	Data center and cloud collaboration	\$125
05/07/18	Skillo	n/a	Training content management and sharing	\$2
05/07/18	Gladly	GGV Capital, Glynn Capital, Greylock Partners, Invenergy Future Fund, New Enterprise Associates	Customer service communication analytics	\$50
05/04/18	Divvy	Pelion Venture Partners	Expense management and business budgeting	\$11
05/04/18	Stratifi	AngellList, Anthemis Group, Cboe Global Markets, HOF Capital, Wolverine Trading	Portfolio risk management	\$7
05/04/18	MemSQL	Accel, Caffeinated Capital, Data Collective, Glynn Capital, GV, IA Ventures	Data warehouse and real-time analytics	\$30
05/03/18	CloudPay Solutions	Hercules Capital, Pinnacle Investment Management, Rho Ventures	Multinational payroll management	\$25
05/03/18	Smarp	Nauta Capital	Employee engagement and advocacy	\$5
05/03/18	IronNet Cybersecurity	C5 Capital, ForgePoint Capital, Kensington Capital Partners, Kleiner Perkins Caufield & Byers	Cyberthreat insights and situational awareness	\$78
05/03/18	BounceX	Battery Ventures, Contour Venture Partners, Cross Creek Advisors, Primary Venture Partners, Rho Ventures	Customer acquisition and behavioral marketing automation	\$37
05/03/18	ThoughtSpot	Australia Future Fund, General Catalyst, Khosla Ventures, Lightspeed Venture Partners, Sapphire Ventures	Enterprise search and data analysis	\$145
05/03/18	Next Force Technology	Big Basin, BluePointe, Green Era, Inspovation, Inventus, J Street, Lightspeed, Mayfield, Moment, Neotribe, ProFounder, Tilden	Data analysis and real-time mobile UI	\$9
05/02/18	TravelPerk	Amplo Venture, Felix Capital, LocalGlobe, Spark Capital, Sunstone Technology Ventures, Target Global	Business travel management and reporting	\$21
05/02/18	Upbound	GV	Multicloud deployment and management	\$9
05/02/18	StorageOS	645 Ventures, Bain Capital Ventures, MMC Ventures	Containerized storage platform	\$8
05/02/18	Cobalt	byFounders, DG Incubation, Draper Associates, eLab Ventures, Plug and Play Tech Center, s28 Capital, Sparkland Capital	Pen test vulnerability management	\$5
05/02/18	Faraday	FreshTracks Capital, Intercap	Customer lifecycle marketing and predictive analytics	\$2

Sources: Company releases, Wall Street research

Equity Financing Activity

Software Private Capital Raise Activity: 2Q 2018 continued

(\$ millions)

Close Date	Company	Participating Investor(s)	Clean Description	Amount
05/01/18	CallMiner	Escalate Capital Partners	Customer experience analytics	\$6
05/01/18	Concentra Analytics	City Securities, ConnectedCapital, Joseph Schull, Morgan Stanley Expansion Capital, One Peak Partners	Business analytics and data science	\$55
05/01/18	Namogoo	Blumberg Capital, GreatPoint Ventures, Hanaco Venture Capital, Inimiti Capital Partners	Unauthorized product ad identification and blocking	\$15
05/01/18	SkyKick	Brenner West Capital Partners	Cloud business management and automation	\$40
05/01/18	MindBridge	8VC, National Bank of Canada, Real Ventures, Reciprocal Ventures, The Group Investment	Financial audit and fraud detection	\$8
05/01/18	Hazy	M12, Notion	Data anonymization	\$1
05/01/18	Signal Vine	ECMC Foundation	Enterprise messaging and communication	\$1
05/01/18	Workframe	MetaProp NYC, Newmark Knight Frank, Venrock	Real estate collaboration and visual workflow tool	\$10
05/01/18	SalesOptimize	Elkstone Partners, Enterprise Ireland	Sales leads search engine	\$1
04/30/18	Zaloni	n/a	Production-grade data lake creation and management	\$2
04/30/18	KELA Group	Vector Capital	Cyber intelligence and threat prevention	\$50
04/29/18	ZenCity	M12, Madrona Venture Group, Vertex Ventures Israel	Social information collection, analytics and reporting	\$1
04/27/18	Datalogue	n/a	Data mining and preparation automation	\$1
04/26/18	GitPrime	Data Collective, OpenView Venture Partners	Software development productivity analytics	\$12
04/26/18	Geospatial Insight	Foresight Group, VenturesOne	Aerial imagery analysis	\$5
04/26/18	RStor	Cisco Investments	Enterprise performance computing platform	\$45
04/26/18	Data Plus Math	Comcast Ventures, Greycroft	Video content analytics	\$5
04/25/18	ScyllaDB	Bessemer Venture Partners, Magma Venture Partners, Qualcomm Ventures, TLV Partners, Western Digital Capital	Real-time big data database	\$10
04/25/18	Bigcommerce	General Catalyst, GGV Capital, Goldman Sachs Private Capital Investing Group, Tenaya Capital	Ecommerce and marketing platform	\$64
04/25/18	Tilkee	Axeleo, Crédit Agricole Création, Evolem, Kreaxi, Omnes Capital	Business proposal tracking and sales prediction	\$4
04/24/18	Leanplum	Canaan Partners, Kleiner Perkins Caufield & Byers, Norwest Venture Partners, Shasta Ventures, Waterwood Group	Mobile marketing and user engagement optimization	\$52
04/24/18	BuildingConnected	Brookfield Ventures	Construction bid management	\$15
04/24/18	Rasa	Basis Set Ventures	Conversational AI development and training	\$1
04/24/18	Pusher	Balderton Capital, Heavybit	Communication and collaboration APIs	\$8
04/24/18	Cognism	London Co-Investment Fund, Newable, South Central Ventures, Startup Funding Club	Sales lead generation and intelligence	\$3
04/23/18	ClauseMatch	Index Ventures, Speedinvest, Talis Capital	Document editing and collaboration	\$5
04/23/18	Veracity	n/a	Operational technology networks security	\$9
04/20/18	Adverity	42CAP, aws Gründerfonds, Mangrove Capital Partners, Speedinvest	Marketing data analytics and campaign management	\$4
04/20/18	Rocketrip	Bessemer Venture Partners, Canaan Partners, GV	Employee spending management and rewards	\$15
04/20/18	Cogito	n/a	Customer engagement analytics	\$5
04/20/18	Booksy	n/a	Reservation and booking management	\$13
04/20/18	Sense360	n/a	Location- and persona-based data collection	\$4
04/19/18	MSurvey	Cross Culture Ventures, Golden Palm Investments, Kapor Capital, Social Capital, TCom Capital	Mobile survey platform	\$4
04/19/18	Vermietet.de	AXA Konzern, Axel Springer Digital Ventures, Berlin Technology Holding, Deutsche Venture Capital, Main Incubator	Real estate portfolio management	\$5
04/19/18	Targetprocess	EBRD Venture Capital Investment Programme, Zubr Capital	Agile project management and collaboration	\$5
04/18/18	BookingBug	Downing Ventures, PeakSpan Capital	Booking management and appointment scheduling	\$13
04/18/18	Saviynt	Carrick Capital Partners	Cloud security and identity governance	\$40
04/18/18	Node	Falmouth Ventures, Recruit Strategic Partners, WndrCo	Networking analytics and data validation	\$5
04/18/18	LucidWorks	AllegisCyber, Granite Ventures, Shasta Ventures, Silver Lake Management, Top Tier Capital Partners	Enterprise search and discovery	\$50
04/17/18	Scality	Bpifrance, Harbert Management, Hewlett Packard Enterprise, Hewlett Packard Pathfinder, IdInvest Partners, Menlo Ventures	Cloud storage and enterprise data archiving	\$60

Sources: Company releases, Wall Street research

Equity Financing Activity

Software Private Capital Raise Activity: 2Q 2018 continued

(\$ millions)

Close Date	Company	Participating Investor(s)	Clean Description	Amount
04/17/18	Drift	Charles River Ventures, General Catalyst, Sequoia Capital	Conversational marketing and sales	\$60
04/17/18	AppOnboard	Korea Investment Partners, London Venture Partners, Mantaray, Mirae Asset, MTG, Ophir CG, Runa Capital, Troy Capital Partners	Application demo authenticity and fidelity optimization	\$15
04/17/18	OhmConnect	AME Cloud Ventures, Aspect Ventures, City Light Capital, Cthulhu Ventures, Floodgate Fund, Radicle Impact	Real-time energy monitoring and notification	\$9
04/17/18	Eightfold.ai	Foundation Capital, Lightspeed Venture Partners	Talent engagement and intelligence	\$18
04/17/18	Wonolo	Base10 Partners, Persol Holdings Company, PivotNorth Capital, Sequoia Capital, Tuesday Capital	Temporary employee staffing and communication	\$13
04/17/18	LawGeex	Aleph, Iool Ventures	Legal document analysis	\$12
04/17/18	Ionic Security	GV, Icon Ventures, Kleiner Perkins Caufield & Byers, Meritech Capita, SunTrust Banks, TechOperators, Ten Eleven, Third Kind	Data security, management and analytics	\$30
04/16/18	HYPR	Boldstart Ventures, MasterCard Start Path Accelerator, Mesh Ventures, RRE Ventures, RTP Ventures, Samsung NEXT Ventures	Biometric data security	\$10
04/16/18	Polyverse	Clear Fir Partners, SpringRock Ventures	Moving target cyber defense technology	\$2
04/16/18	Measurabl	Borealis Ventures, Camber Creek, Concrete VC, DivcoWest, Impact Engine, Salesforce Ventures, Sway Ventures	Sustainability data collection and insights	\$7
04/16/18	Kolide	Matrix Partners	Complex infrastructure analytics	\$8
04/16/18	Ceterus	Alerion Ventures, Grotech Ventures, Harbert Growth Partners, IDEA Fund Partners, TechOperators	Bookkeeping and accounting automation	\$10
04/16/18	Switch Automation	n/a	Real estate assets monitoring and analysis	\$3
04/13/18	PBWorks	n/a	Collaborative editing, file sharing and project management	\$3
04/13/18	RapidSOS	Castor Ventures, Chestnut Street, CSAA Insurance, Forté, Highland Capital, M12, Spike, Strawberry Creek, The Yard	Emergency communication and next generation 911	\$16
04/13/18	ServiceTitan	Battery Ventures, Bessemer Venture Partners, Hive Ventures, ICONIQ Capital	Invoice management, CRM and marketing analytics	\$50
04/13/18	Onapsis	.406 Ventures, Arsenal Growth, Evolution Equity Partners, LLR Partners	Preventative security vulnerability and compliance controls	\$31
04/13/18	RiskSense	n/a	Cyber risk identification, remediation and monitoring	\$8
04/12/18	Axonize	Cornerstone Venture Partners, Deutsche Telekom, Meron Capital, StageOne Ventures	IoT system integration and orchestration	\$6
04/12/18	OwnBackup	Innovation Endeavors, Insight Venture Partners, Oryzn Capital, Salesforce Ventures, Vertex Ventures Israel	Cloud-to-cloud backup and recovery	\$16
04/12/18	Checkr	Accel, T. Rowe Price, Y Combinator	Applicant background check and onboarding	\$100
04/12/18	Empow	Ascent Venture Partners	Cyber security infrastructure orchestration	\$10
04/12/18	Punchh	Cervin Ventures, Sapphire Ventures	Digital marketing and customer engagement	\$20
04/12/18	Xeeva	Greenspring Associates, Peak Equity Partners	Source-to-pay procurement process management	\$40
04/12/18	Epistema Analytics	Flint Capital, Mithril Capital Management, MizMaa Ventures, Pico Partners, Slack Technologies	Collaborative knowledge analytics	\$6
04/11/18	DemandJump	4G Ventures, Cultivation Capital, Flyover Capital, Hyde Park Venture Partners, Revolution	Customer acquisition and targeted marketing	\$6
04/11/18	Wurk	Altitude Investment Management, Arcadian, ArcView Investor Network, Phyto Partners, Poseidon Asset Management	HR management, recruiting, payroll and scheduling	\$3
04/11/18	Eficode	Bocap	Product design and development automation	\$7
04/10/18	StackRox	Amplify Partners, Redpoint Ventures, Sequoia Capital	Adaptive threat protection	\$25
04/10/18	Geoblink	Centre for Industrial Technological Development, Elaia Partners, Government of Madrid, Nauta Capital	Geospatial business intelligence	\$6
04/10/18	Access UK	HgCapital	ERP, CRM and document management	\$43
04/10/18	Jedox	eCAPITAL entrepreneurial Partners, Iris Capital, Wecken & Cie	Corporate performance management and analytics	\$25
04/10/18	Fleetsmith	Harrison Metal Capital, Index Ventures, Upfront Ventures	Apple device fleet management and unification	\$8
04/10/18	CloudMargin	IHS Markit, Illuminate Financial Management, Jefferies	Collateral and risk management	\$10
04/10/18	ObserveIT	Bain Capital Ventures	Insider threat identification and elimination	\$20
04/10/18	PullRequest	Defy Ventures, Fika Ventures, Gradient Ventures, Lynett Capital, Y Combinator	Code review automation	\$8
04/09/18	Armis	Bain Capital Ventures, Red Dot Capital Partners, Sequoia Capital Israel, Tenaya Capital	Unmanaged devices identification	\$30
04/09/18	Gorgias	n/a	Ecommerce customer support management	\$2
04/06/18	Pipefy	500 Startups, Founders Fund, FundersClub, ONEVC, OpenView, Redpoint eventures, Trinity Ventures, Valor Capital Group	Enterprise process management and automation	\$19
04/06/18	DimensionalMechanics	n/a	Artificial intelligence application development	\$4

Sources: Company releases, Wall Street research

Equity Financing Activity

Software Private Capital Raise Activity: 2Q 2018 continued

(\$ millions)

Close Date	Company	Participating Investor(s)	Clean Description	Amount
04/05/18	Suplari	Amplify Partners, Madrona Venture Group, Shasta Ventures, Two Sigma Ventures, Workday Ventures	Enterprise procurement analytics	\$10
04/05/18	WorkFusion	Alpha Intelligence, Declaration, Georgian, Guardian Life Insurance, Hawk Equity, iNovia, NGP	Enterprise operations automation and digitization	\$50
04/05/18	Javelo	Bpifrance, ISAI	Employee goal management and performance measurement	\$1
04/05/18	Arviem	Chanco International Group, CreditGate24, Investiere, Nest Sammelstiftung, SICPA Security Solutions, Swisscom Ventures	Supply chain visibility management	\$10
04/04/18	Cherwell Software	Kohlberg Kravis Roberts	Digital service management platform	\$172
04/04/18	Storage Made Easy	n/a	Storage asset unification and security	\$4
04/04/18	Coveo	Evergreen Coast Capital	Intelligent enterprise search and predictive insights	\$100
04/04/18	Glisser	Downing Ventures	Audience engagement and analytics	\$2
04/03/18	Lytics	Comcast Ventures, EPIC Ventures, Rembrandt Venture Partners, Two Sigma Ventures, Voyager Capital	Customer data intelligence and marketing	\$16
04/03/18	Red Balloon Security	Abstract, Alsop Louie, American Family, Bain Capital, Columbia Technology, Greycroft, In-Q-Tel, Pritzker Group	Intrusion defense and situational awareness	\$22
04/03/18	Insider	Dogan Yayin Holding, Sequoia Capital India, Wamda Capital	Marketing spend optimization and campaign targeting	\$11
04/03/18	SalesLoft	Emergence Capital Partners, Insight Venture Partners, LinkedIn	Sales intelligence engine and communication	\$45
04/03/18	Flywheel	n/a	WordPress hosting and management	\$9
04/02/18	ProtectWise	n/a	Network security and threat detection	\$6
04/01/18	ClicData	Finorpa	Business intelligence dashboarding and reporting	\$2

Sources: Company releases, Wall Street research

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