Technology Group

Quarterly Software Sector Review | Q4 2020



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HW HarrisWilliams

HW Software Introduction

HARRIS WILLIAMS ("HW")

- 25+ years and more than 1,000 closed transactions
- 350+ professionals across eight offices globally
- 170+ closed transactions in the last 24 months
- 10 industry groups

FOCUSED ADVISORY SERVICES

- Mergers and acquisitions (M&A)
- Capital raises
- Corporate divestitures

CONSISTENT RECOGNITION FOR QUALITY



HW TECHNOLOGY GROUP

- 35+ dedicated Technology professionals
- Technology offices include Boston, San Francisco, and London

KEY TECHNOLOGY THEMES

- ✓ SaaS / Cloud
- ✓ Data & Analytics

✓ Digital Transformation

✓ A.I. / Machine Learning

HORIZONTAL FOCUS SECTORS

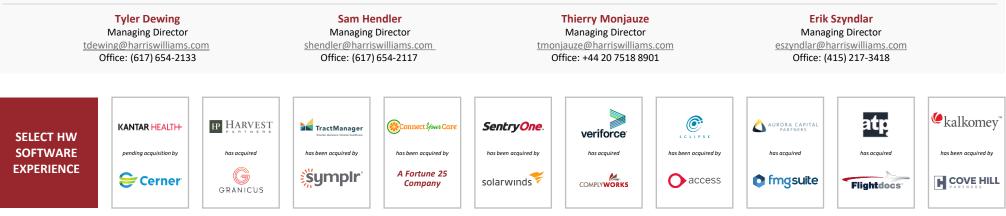
- Application Software
- Cloud Managed Services and Hosting Solutions
- Compliance Solutions
- CRM and Marketing Automation
- Human Capital Management
- Infrastructure and Security Software
- IT and Tech-Enabled Services
- Marketing, Research, and Insights Software

VERTICAL FOCUS SECTORS

- Architecture, Engineering, and Construction Software
- Education Technology and Services
- Energy Technology
- Facilities and Real Estate Software
- Financial Technology and Payments
- Government Technology
- Healthcare IT
- Industrial and Supply Chain Technology
- Internet and eCommerce
- Retail Technology

HW SOFTWARE TEAM

TECHNOLOGY



Recent HW Technology Transaction: TractManager

HW's Technology Group advised TractManager on its acquisition by symplr.



HW DEAL CONTACTS

Sam Hendler Managing Director <u>shendler@harriswilliams.com</u> +1 (617) 654-2117

TRANSACTION OVERVIEW

TractManager is a leading provider of cloud-based, expert-supported solutions to optimize hospital operations across supply chain, labor management, and compliance. TractManager has a blue-chip customer base consisting of more than 2/3 of U.S. hospitals and payors, representing 83% of U.S. covered lives.

symplr, a portfolio company of Clearlake Capital, is a global leader in enterprise governance, risk management, and compliance SaaS solutions for hospitals. The symplr platform offers solutions that span provider data management, provider credentialing services, compliance, patient safety, workforce management, and vendor management. The acquisition of TractManager represents symplr's tenth successful acquisition in the past six years, and its fifth under sponsorship from Clearlake.

Together with TractManager, symplr will enable healthcare organizations to manage provider and supply chain data, including credentials, authorizations, privileges, quality metrics, staffing, time and attendance, contracts, and spend across employees and third parties. Additionally, customers will benefit from the expanded scale, platform innovation, corporate resources, and service capabilities the combined company will deliver.

RELEVANT SUB-SECTORS

CLINICAL LABOR SUPPLY CHAIN

GRC

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Recent HW Technology Transaction: ConnectYourCare

HW's Technology Group advised ConnectYourCare on its acquisition by a Fortune 25 company.

CONSUMER-DIRECTED

HFAITHCARF



COMPANY OVERVIEW

ConnectYourCare ("CYC") is a comprehensive SaaS platform for consumer-directed healthcare ("CDH") and benefit account administration, savings, payments, and claims substantiation. CYC's intuitive software, payment capabilities, and integrated banking solutions enable flexible benefit coverage with lower costs and improved compliance as well as higher consumer participation, education, and satisfaction.

The platform provides employers, brokers, and partners with a comprehensive benefit administration software suite that seamlessly incorporates payments and banking capabilities, enabling employees to make more informed benefit decisions and efficiently manage their benefits. CYC's purpose-built software tools cater to the unique needs of human resources professionals, brokers, and partners, and deliver a compelling value proposition that has resulted in a diversified customer base of 2,200+ employers across industries and market segments. The company's recently launched, digital-native custodial banking platform and Non-Bank-Trustee ("NBT") designation have driven meaningful growth from a new and highly profitable revenue stream that complements its recurring software subscription and reoccurring payment interchange revenue.

RELEVANT SUB-SECTORS

INTEGRATED SOFTWARE & PAYMENTS

BANKING **TECHNOLOGY**

HCM & BENEFITS ADMINISTRATION

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Recent HW Technology Transaction: SentryOne

HW's Technology Group advised SentryOne on its acquisition by SolarWinds.



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TRANSACTION OVERVIEW

SentryOne provides mission-critical Database Performance Management ("DPM") and DataOps software. The company's solutions enable customers to monitor, document, test, build, and migrate their mission-critical workloads in on-premises, hybrid, and multi-cloud environments.

The company has built a strong, well-respected product portfolio guided by a customer-centric model well-aligned to SolarWinds' mission and commitment to the IT professional community. The SentryOne offering complements the on-premises and cloud-native DBM offerings SolarWinds has today to serve the full needs of the mid-market and better serve larger organizations.

SolarWinds is a leading provider of powerful and affordable IT management software. Its products give organizations worldwide the power to monitor and manage their IT services, infrastructures, and applications, whether on-premises, in the cloud, or via hybrid models. The company continuously engages with technology professionals to understand the challenges they face in maintaining high-performing and highly available IT infrastructures and applications.



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Select Software M&A Transactions – Q4 2020

Closed December 18, 2020	TA Associates and TPG Capital's acquisition of Planview
TAASSOCIATES	 Planview is a provider of cloud-based portfolio management and work management software designed to support the various styles of work across an enterprise.
TPG planview.	 The company's solutions are used by over 3,500 customers and 1 million users worldwide to drive organizational focus on strategic outcomes and accelerate on-strategy delivery at an enterprise scale.
Enterprise Value: \$1,600M	 Following the acquisition, TA Associates and TPG will support Planview's management team to continue pursuing organic and inorganic growth opportunities that will enhance the portfolio of solutions.
Closed December 17, 2020	Harvest Partners' investment in Granicus
	 Granicus is a provider of cloud-based software solutions that enable federal, state, and local government entities to automate workflows, increase transparency, and strengthen civic engagement.
HP HARVEST GRANICUS	 The company's digital government platform is used by more than 4,500 public sector organizations that serve more than 250 million citizens and helps increase civic engagement by more than 500%.
	 Harvest will support Granicus' continued growth as government agencies accelerate digital transformation initiatives and seek modern software solutions to more effectively and efficiently serve constituents across channels.
Announced on December 14, 2020	PTC's pending acquisition of Arena Solutions
	 Arena Solutions is a provider of cloud product life cycle management and product development software for the electronics, high-tech, and medical device industries.
S ptc 🚺 arena	 The company's product life cycle management platform unifies PLM, quality management, and requirement management functions into a single solution that is used by stakeholders across the design and manufacturing process.
Enterprise Value: \$715M	• With the acquisition, Arena Solutions will complement PTC's previous acquisition of OnShape and position PTC to provide customers with a complete, cloud-based CAD and PLM solution.
Announced on November 19, 2020	Leonard Green & Partners' pending acquisition of ECI Software Solutions
	 ECI Software Solutions is a provider of cloud-based business software solutions to small and medium-sized manufacturing, wholesale/retail distribution, building and construction, and field service organizations.
LGP eci	 The company's portfolio of industry-specific Enterprise Resource Planning solutions includes tools for accounting, purchasing, warehousing, and inventory management.
Enterprise Value: \$2,500M	 Following the acquisition, LGP will provide capital to continue to grow ECI's portfolio of SMB-focused solutions through organic and inorganic initiatives.
Closed October 23, 2020	Stone Point Capital's strategic investment in Lone Wolf Technologies
	 Lone Wolf Technologies is a provider of back office and transaction management software for brokers and agents in the residential real estate end-market.
STONE POINT CAPITAL	• The company's 1.4 million real estate professionals use Lone Wolf's digital tools and technology to streamline all stages of a real estate transaction process for both buyers and sellers

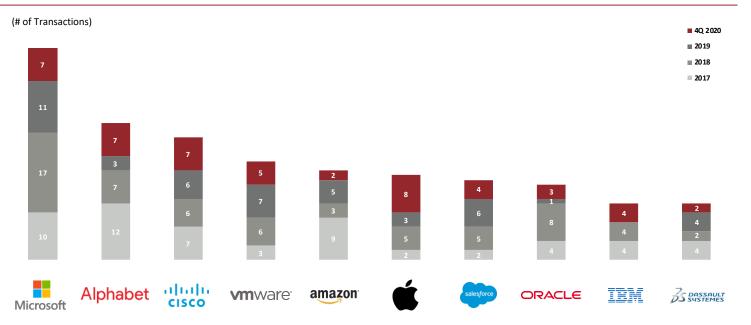
transaction process for both buyers and sellers.

• Stone Point Capital's strategic investment will enable the Lone Wolf team to continue executing on its strategic growth plan and continue building a connected, fully digital real estate experience for its clients.

Software Acquisition Activity – Strategic Acquirers

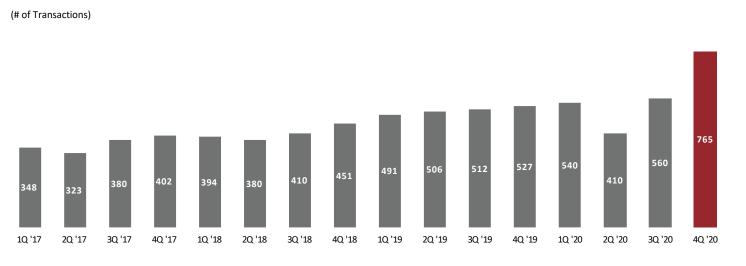
Most Active Strategic Acquirers of Software Assets by Volume¹

- Activity among the 10 largest strategic software acquirers decreased slightly compared to 2019, with 49 acquisitions in 2020.
- Microsoft, Alphabet, and Cisco were the most active strategic acquirers in 2020, each completing seven acquisitions.
- Notable Q4 2020 strategic software transactions include VMware's acquisition of Salt Stack, salesforce.com's acquisition of Slack Technologies, and Cisco's acquisition of Portshift.



Global Strategic Acquirer Software M&A Activity by Volume¹

- Globally, strategic software M&A registered 765 acquisitions in Q4 2020, an increase from 560 in Q3 2020.
- 2020 not only brought challenges as companies faced the COVID-19 pandemic, but also opportunities for strategics to focus on M&A around vertical-specific software solutions to expand and complement their current solutions.

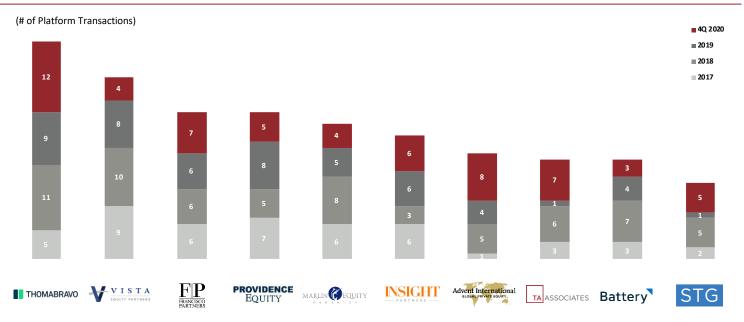




Software Acquisition Activity – Private Equity

Most Active Private Equity Buyers of New Software Platforms by Volume¹

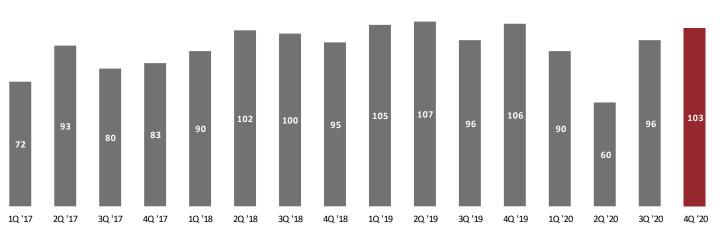
- The 10 most active software investors completed 61 new platform investments in 2020. Activity among the most active private equity software buyers remained on pace with 2019 levels.
- Thoma Bravo remained the most active software private equity firm in 2020, completing 12 platform acquisitions including Command Alkon, Exostar, Syntellis Performance Solutions, Majesco, and Foundation Software.
- Other notable Q4 2020 private equity platform acquisitions include Carlyle's acquisition of Tribute Technology, Francisco Partners' acquisition of Forcepoint, and LGP's acquisition of ECi.



Global Private Equity New Software Platforms M&A Activity by Volume¹

- Globally, private equity buyers registered 103 new software platform investments in Q4 2020, an increase from Q3 2020.
- Private equity investment across software continued its strong momentum in the back half of the year as investors began to look at new platform investments.

(# of Platform Transactions)

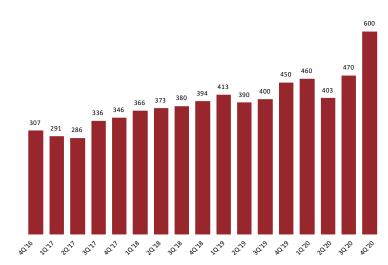


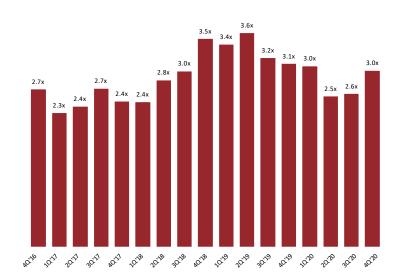
Application Software – M&A Market Summary

Application Software M&A Volume¹ (Global)

Median M&A Revenue Multiples¹ (Reported)

- Application Software M&A registered 600 transactions in Q4 2020, representing a 28% increase from the prior quarter.
- Median reported Application Software M&A transaction multiples increased to 3.0x revenue in Q4 2020.





Notable Application Software M&A Transactions^{1,4,5}

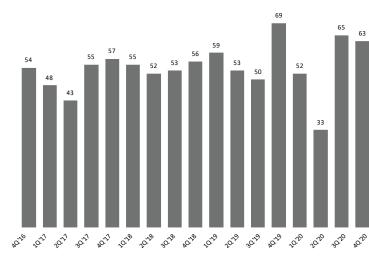
- In Q4 2020, vertical-specific Application Software companies continued to be sought after by both strategic and financial buyers.
- Notable Q4 2020 vertical-specific software transactions include Marlin Equity Partners' acquisition of StarCompliance (Compliance), Vista Equity Partner's acquisition of Pipedrive (E-Commerce), and TA Associates' acquisition of Priority Software (Enterprise).

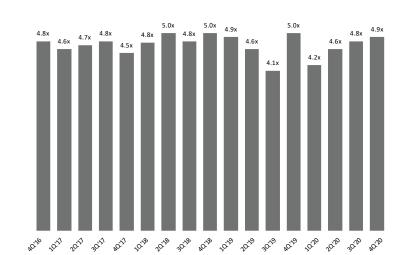
DATE CLOSED	Acquirer	Target	DESCRIPTION	ENTERPRISE VALUE (MM)	Revenue Multiple
			Application Software	l i	l i
Pending	Francisco Partners	Intl. segment of CDK Global	Provider of automotive retail software solutions.	\$1,450	NA
Pending	ANSYS	Analytical Graphics	Provider of commercial modeling and analysis software for the aerospace, defense, and telecommunications industries.	\$700	NA
Pending	Providence Strategic Growth	Signaturit Solutions	Provider of electronic signature and document management software.	NA	NA
Pending	NEOGOV (Warburg)	PowerDMS	Provider of a compliance, policy, and training management platform for healthcare, government, and law enforcement.	NA	NA
12/23/2020	TechTarget	BrightTALK	Provider of a webinar and video marketing software platform.	\$149	NA
12/17/2020	Vista Equity Partners	Pipedrive	Provider of sales management software tools to help sales teams manage sales processes.	\$1,500	NA
12/17/2020	Marlin Equity Partners	StarCompliance	Provider of regulatory compliance software solutions for the financial services industry.	NA	NA
12/08/2020	Spotify Technology	Megaphone	Provider of podcast advertising software.	\$235	NA
12/03/2020	Exterro (Leeds Equity)	AccessData Group	Provider of digital forensics and e-Discovery software for corporations, the public sector, and law firms.	NA	NA
12/02/2020	Novacap Investments	Logibec	Provider of healthcare information systems and software.	NA	NA
12/01/2020	Lightspeed POS	Upserve	Provider of a restaurant management and point-of-sale system.	\$430	10.8x
12/01/2020	The Vistria Group	Edmentum	Provider of online learning software solutions.	NA	NA
10/30/2020	Intel	SigOpt	Provider of an enterprise-grade optimization platform for model development.	NA	NA
10/30/2020	NerdWallet	Fundera	Provider of an online lending platform intended to connect small business owners with lenders.	NA	NA
10/29/2020	NAVEX Global (BC Partners)	CSRware	Provider of environmental sustainability compliance software solutions.	NA	NA
10/27/2020	HgCapital	CaseWare International	Provider of accounting and audit software solutions.	NA	NA
10/05/2020	TA Associates	Priority Software	Provider of business management and ERP software for vertical markets.	\$250	NA
10/02/2020	Imaweb (Providence Strategic Growth)	Evolutive Systems	Provider of operations management software for the automative industry.	NA	NA
MEDIAN				\$430	10.8x

SaaS M&A Volume¹ (Global)

Median M&A Revenue Multiples¹ (Reported)

- SaaS M&A volume registered 63 transactions in Q4 2020, a slight decrease from last quarter.
- Median reported SaaS transaction revenue multiples increased slightly to 4.9x in Q4 2020.





Notable SaaS M&A Transactions^{1,4,5}

- Cloud continues to become a more desirable delivery model and sector activity remains robust, with strong interest from both private equity investors and strategic buyers.
- Notable Q4 2020 SaaS transactions include LGP's pending acquisition of ECI Software, Insight Partners' acquisition of CommerceHub, and Stone Point's investment in Lone Wolf Technologies.

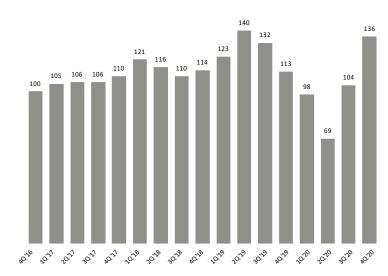
DATE				ENTERPRISE	REVENUE
Closed	Acquirer	TARGET	DESCRIPTION	VALUE (MM)	MULTIPLE
			SaaS		
Pending	Leonard Green & Partners	ECI Software Solutions	Provider of cloud-based industry specific ERP software for small and medium-sized businesses.	\$2,500	NA
Pending	HgCapital	Benevity	Provider of a web-based workplace giving and volunteer management platform for organizations.	\$1,000	NA
Pending	salesforce.com	Slack Technologies	Provider of a SaaS business collaboration technology software platform.	\$27,770	33.3x
Pending	Honeywell	Sparta Systems (New Mountain Capital)	Provider of enterprise quality management software (EQMS).	\$1,300	NA
1/15/2021	PTC	Arena Solutions	Provider of cloud-based product lifecycle management and quality management system software solutions.	\$715	14.3x
12/23/2020	symplr (Clearlake)	TractManager	Provider of SaaS compliance and business process improvement solutions for healthcare organizations.	HW Co	INFIDENTIAL
12/18/2020	TA Associates; TPG Capital	Planview	Provider of cloud-based portfolio and resource management software solutions.	\$1,600	NA
12/17/2020	Harvest Partners	Granicus	Provider of a citizen engagement platform for government and public sector organizations.	HW Co	INFIDENTIAL
12/09/2020	Thoma Bravo	Axiom Software	Provider of cloud-based risk management and regulatory solutions for the financial services industry.	NA	NA
12/07/2020	Adobe	Workfront	Provider of enterprise work management and project management software.	\$1,500	NA
12/02/2020	WCAS	TrueCommerce	Provider of online electronic data interchange software solutions for small and mid-tier companies.	\$700	NA
12/02/2020	Insight Partners	CommerceHub	Provider of cloud-based supply chain software for multi-channel e-commerce merchants.	NA	NA
12/01/2020	EQT	thinkproject	Provider of a cloud-based construction project management platform.	NA	NA
11/02/2020	Coupa Software	LLamasoft	Provider of SaaS supply chain design and analysis software solutions.	\$1,438	NA
10/30/2020	Carlyle	Tribute Technology	Provider of a SaaS payments platform for funeral homes.	NA	NA
10/23/2020	Stone Point	Lone Wolf Technologies	Provider of cloud-based deal management and real estate transaction management software solutions.	NA	NA
10/21/2020	Turnitin	ExamSoft	Provider of web-based educational assessment software solutions for students and teachers.	NA	NA
10/05/2020	Avalara	Transaction Tax Resources	Provider of SaaS sales tax research tax automation software solution tools.	\$377	NA
10/05/2020	Quorum (Thoma Bravo)	Landdox	Provider of a cloud-based map and land software application solution.	NA	NA
9/30/2020	Apax Partners	MyCase	Provider of cloud-based legal practice management efficiency software solutions.	\$193	NA
Median				\$1,350	12.2x

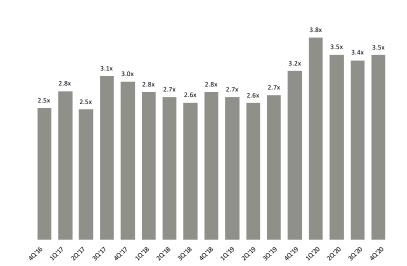
Data and Analytics – M&A Market Summary

Data and Analytics M&A Volume¹ (Global)

Median M&A Revenue Multiples¹ (Reported)

- Data and Analytics M&A registered 136 transactions in Q4 2020, a significant increase from the prior quarter.
- Median reported Data and Analytics transaction multiples increased to 3.5x in Q4 2020.



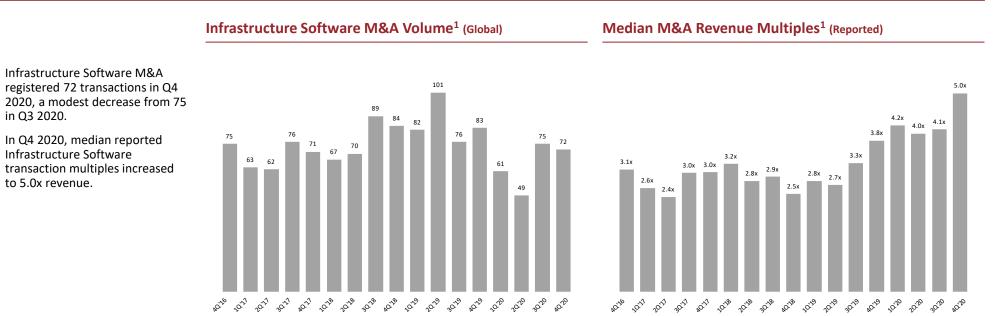


Notable Data and Analytics M&A Transactions^{1,4,5}

- Data and Analytics continues to represent a key focus area for strategic acquirers and financial buyers, as decision making continues to be driven by complex and real-time data.
- Notable Q4 2020 Data and Analytics transactions include S&P Global's pending acquisition of IHS Markit, Thoma Bravo's pending take private of RealPage, and Vista Equity Partners' acquisition of Gainsight.

Date Closed	Acquirer	TARGET	DESCRIPTION	Enterprise Value (mm)	Revenue Multiple
			Data and Analytics		
Pending	S&P Global	IHS Markit	Provider of data and analytics software solutions across numerous industries, including finance, energy, and transportation.	\$45,304	10.6x
Pending	Thoma Bravo	RealPage	Provider of property management software and data analytics for the real estate industry.	\$9,858	8.8x
Pending	Instructure (Thoma Bravo)	Certica Solutions	Provider of educational K-12 assessment and data analytics solutions.	NA	NA
Pending	Nasdaq	Verafin	Provider of cloud-based enterprise fraud detection and anti-money laundering software solutions for financial institutions.	\$2,750	NA
1/08/2021	ServiceNow	Element Al	Provider of artificial intelligence software solutions for problem solving and decision guidance.	\$230	NA
1/05/2021	TIBCO Software (Vista Equity Partners)	Information Builders	Provider of software solutions for BI and analytics, enterprise integration, data integrality, and performance management.	\$1,000	NA
1/05/2021	Dassault	NuoDB	Provider of a relational database software solution for cloud-enabled global applications.	NA	NA
12/21/2020	NuWave Solutions (AE Industrial Partners)	ProModel	Provider of predictive and prescriptive analytics and model-based software solutions.	NA	NA
12/16/2020	Cedar Gate Technologies (GTCR)	Deerwalk	Provider of health management, data management, and healthcare analytics software.	NA	NA
12/15/2020	Blacksmith Applications (Strattam Capital)) TABS Analytics	Provider of cloud-based trade promotion optimization solutions for the CPG market.	NA	NA
12/14/2020	Alphabet	Actifio	Provider of data virtualization and management software solutions.	NA	NA
12/08/2020	geoLOGIC (BV Investment Partners)	SubsurfaceIO	Provider of data management, mapping, and analysis software solutions for the oil and gas industry.	NA	NA
12/02/2020	NuWave Solutions (AE Industrial Partners)	BigBear	Provider of big data computing and analytical solutions to the national security community with the US government.	NA	NA
12/02/2020	Vista Equity Partners	Gainsight	Provider of a data-driven customer success and product management software platform.	\$1,100	NA
11/23/2020	Autodesk	Spacemaker	Provider of software to analyze data for building site selection and planning.	\$240	NA
11/12/2020	Zywave (Clearlake)	Advisen	Provider of data, analytics, insights, and technology solutions for the commercial property and casualty insurance market.	\$60	NA
11/02/2020	Twilio	Segment.io	Provider of a customer data collection and analytics software solution.	\$2,916	NA
10/21/2020	Vector Capital	Ma rkLogi c	Provider of a operational and transactional Enterprise NoSQL database software platform.	NA	NA
10/09/2020	IDERA (HGGC; TA Associates)	Qubole	Provider of a cloud-based data platform for analyzing and processing data sets.	NA	NA
10/09/2020	LLR Partners	YCharts	Provider of data and analytics solutions for investment professionals, portfolio managers, and wealth advisors.	\$203	NA
Median				\$1,050	9.7x

Infrastructure Software – M&A Market Summary



Notable Infrastructure Software M&A Transactions^{1,4,5}

M&A activity within Infrastructure Software remained strong in Q4 2020, as both strategics and private equity investors view M&A as an attractive strategy to accelerate growth and create holistic security platforms.

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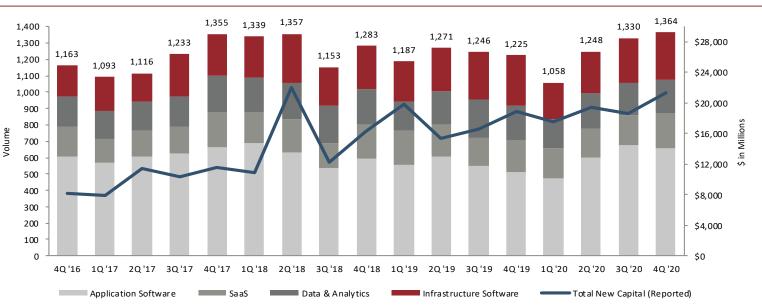
Noteworthy Infrastructure Software M&A transactions in Q4 2020 include Francisco Partners' acquisition of Forcepoint, SolarWinds' acquisition of SentryOne, and TA Associates' acquisition of Netwrix.

Date Closed	Acquirer	Target	DESCRIPTION	Enterprise Value (MM)	Revenue Multiple
			Infrastructure Software		
Pending	Thoma Bravo	Flexera Software	Provider of IT management solutions, including software security, cloud management, and SaaS management.	\$3,000	NA
Pending	NortonLifeLock	Avira	Provider of anti-virus and security software.	\$359	NA
1/27/2021	Juniper Networks	Apstra	Provider of an intent-based networking operating software solution for data center network automation.	NA	NA
Pending	New Relic	Pixie Labs	Provider of a next generation machine intelligence observability solution.	\$150	NA
1/11/2021	Francisco Partners	Forcepoint	Provider of cybersecurity solutions for user and data protection.	\$1,100	1.7x
12/15/2020	Palo Alto Networks	Expanse	Provider of IT operations management solutions to discover, manage and secure global internet assets.	\$800	NA
12/10/2020	Thoma Bravo	Venafi	Provider of enterprise key and certificate management security solutions.	\$1,150	NA
12/07/2020	TZP Group	Awareness Technologies	Provider of endpoint security software solutions for the consumer and corporate markets.	NA	NA
12/02/2020	Imprivata (Thoma Bravo)	FairWarning	Provider of cross-platform healthcare privacy software solutions for electronic health records.	NA	NA
11/18/2020	FireEye	Respond Software	Provider of event analysis and decision support software for security incident management and response.	\$187	NA
11/02/2020	PKWare (Thompson Street Capital)	Dataguise	Provider of data security intelligence and protection software solutions.	NA	NA
10/29/2020	SolarWinds	SentryOne	Provider of database performance management and DataOps software.	\$143	HW CONFIDENTIAL
10/26/2020	Cisco Systems	Portshift	Provider of a cloud security infrastructure protection platform.	NA	NA
10/19/2020	Corsearch (Audax Group)	Marketly	Provider of an anti-piracy and anti-counterfeit brand protection platform.	\$100	NA
10/13/2020	VMware	SaltStack	Provider of cloud orchestration, server automation, and IT infrastructure management software solutions.	NA	NA
10/06/2020	MidOcean Partners	InterVision Systems	Provider of IT infrastructure solutions for the cloud ecosystem.	NA	NA
10/01/2020	TA Associates	Netwrix Corporation	Provider of a visibility and governance software solution designed to detect insider threats.	NA	NA
10/01/2020	Fastly	Signal Sciences	Provider of a cloud and hybrid web application firewall and API protection software.	\$775	NA
9/25/2020	Veeam Software (Insight Partners)	Kasten	Provider of data management software solutions for cloud-native infrastructure.	\$150	NA
Median				\$359	3.5x

Private Placement Activity by Software Sector

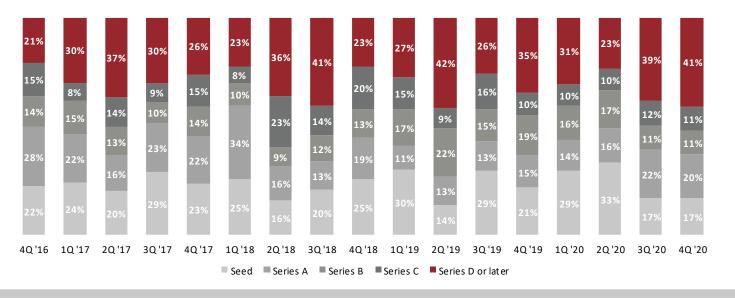
Private Placements by Software Sub-Sector and New Capital Raised^{1,4}

- There were 1,364 private placement financings in Q4 2020, which represents an 11% increase compared to Q4 2019.
- Total reported capital investment in the software sector increased in Q4 2020 and remains above historical averages.



Private Placement Capital Raised by Round^{1,4} (As Percentage of Total Reported Private Placement Capital)

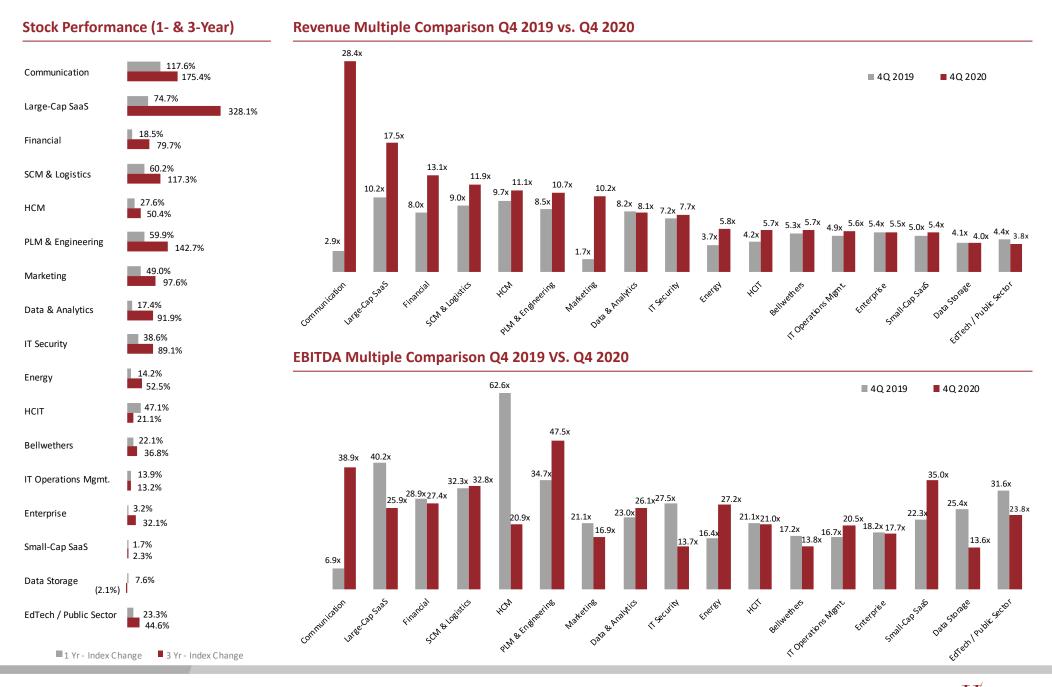
- In Q4 2020, the majority of private capital invested occurred in the larger stage (Series B or later) rounds, making up 63% of total capital invested.
- Notable private placements across stages included Zenoti's \$160 million Series D led by Advent, Forter's \$125 million Series E led by Bessemer Venture Partners, and Chainalysis' \$100 million Series C led by Addition.



Select Recent Software Private Placements^{1,4}

DATE	COMPANY	SECTOR	ROUND	ROUND SIZE (\$MM)	TOTAL RAISED (\$MM)	INVESTORS (CURRENT ROUND)	DESCRIPTION
12/28/20	unqork	Infrastructure	С	\$258	\$416	BlackRock; Eldridge; Fin VC; HPE; Schonfeld Strategic Advisors; Advent International; CapitalG; Goldman Sachs; Broadridge Financial Solutions; Aquiline Tech Growth	Provider of an enterprise no-code application development platform.
12/01/20	루 Flock Freight	SaaS	C	\$114	\$184	SoftBank; Volvo Group Venture Capital; GV; Signalfire; GLP Capital Partners	Provider of a freight shipping and management technology platform.
11/16/20	STRAVA	SaaS	F	\$110	\$182	Sequoia Capital; TCV; Madrone Capital; Jackson Square Ventures; Dragoneer Investment Group; Go4it Capital	Provider of a mobile social application and online platform for runners and cyclists worldwide.
11/12/20	Menlo Security	Infrastructure	E	\$100	\$800	Vista Equity Partners; General Catalyst; JPMorgan Chase; Neuberger Berman; Osage University Partners	Provider of a cloud-based secure web gateway.
11/09/20	🚺 Udemy	SaaS	Late Stage	\$100	\$273	Whitehill Ventures; Ben Jen Holdings; Mindrock Capital	Provider of an online learning platform for students.
11/04/20	T KLAVIYO	SaaS	С	\$200	\$359	Accel Partners; Summit Partners	Provider of an email and SMS marketing platform.
10/28/20	(II) SentinelOne [.]	Infrastructure	F	\$267	\$697	Tiger Global; Insight Partners; Sequoia Capital; Qualcomm Ventures; Third Point Ventures	Provider of an AI and machine learning-based endpoint security platform for remote and distributed workforces.
10/27/20	Peightfold.ai	SaaS	D	\$125	\$177	General Catalyst; Foundation Capital; Institutional Venture Partners; Lightspeed Venture Partners; Capital One Ventures	Provider of a talent intelligence platform designed to help companies find, recruit, and retain workers.
10/21/20	TEKION	SaaS	C	\$150	\$216	Advent International; Index Ventures; Fraser McCombs Capital; Airbus Ventures; EXOR Seeds	Provider of cloud-based customer experience and sales efficiency software for the automotive retail industry.
10/20/20	zenoti	SaaS	D	\$160	\$254	Advent International; Tiger Global; Steadview	Provider of cloud-based predictive analytics and communication software for the beauty and wellness industry.
10/06/20	tipalti	SaaS	E	\$150	\$296	Durable Capital; Greenoaks Capital; 01 Advisors	Provider of a cloud-based accounts payable automation and global remittance automation solutions.
10/06/20	V onapsis	Infrastructure	D	\$55	\$118	CDPQ; LLR Partners; .406 Ventures, LLC; Arsenal Growth; Night Dragon Security	Provider of cyber-security and compliance for solutions securing business-critical applications and infrastructure.
09/22/20	🗭 dialpad	SaaS	E	\$133	\$220	OMERS; GV; Andreessen Horowitz; ICONIQ Capital; Work-Bench; SoftBank; Felicis Ventures	Provider of a web-based enterprise communications software platform.

Public Software Valuation Multiples by Sector¹

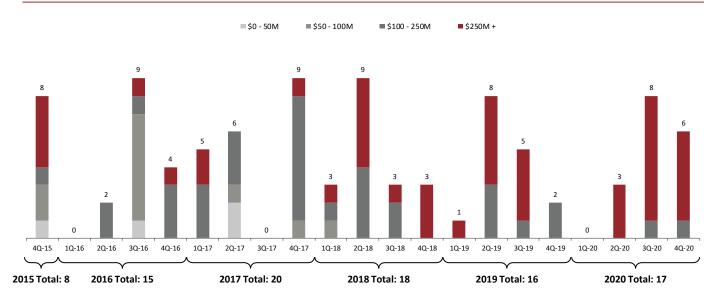


Key Metrics by Sector – Comparable Public Software Companies¹

	COMP/	ARABLE COMPANY SET MED	DIANS		CORRELATION WITH EV / REVENUE MULTIPLE					
	EV / LTM REVENUE MULTIPLE	NTM REVENUE GROWTH	NTM EBITDA GROWTH	LTM EBITDA MARGIN	NTM REVENUE GROWTH	NTM EBITDA GROWTH	LTM EBITDA MARGIN			
Communication	28.4x	21%	37%	20%	97%	34%	-			
Large-Cap SaaS	17.5x	19%	111%	12%	74%	-	-			
Financial	13.1x	11%	27%	33%	18%	18%	30%			
SCM & Logistics	11.9x	9%	19%	21%	86%	26%	47%			
HCM	11.1x	12%	86%	14%	55%	-	21%			
PLM & Engineering	10.7x	11%	50%	22%	70%	-	43%			
Marketing	10.2x	18%	57%	16%	76%	67%	-			
Data & Analytics	8.1x	10%	84%	15%	79%	-	86%			
IT Security	7.7x	11%	48%	26%	32%	-	-			
Energy	5.8x	8%	39%	18%	88%	-	86%			
HAT	5.7x	12%	59%	25%	75%	-	52%			
Bellwethers	5.7x	3%	18%	32%	73%	34%	-			
IT Operations Mgmt.	5.6x	8%	72%	22%	87%	-	-			
Enterprise	5.5x	3%	22%	30%	87%	51%	28%			
Small-Cap SaaS	5.4x	8%	460%	13%	41%	-	30%			
Data Storage	4.0x	6%	185%	12%	10%	-	22%			
EdTech / Public Sector	3.8x	12%	95%	17%	-	-	66%			

Summary of Technology IPOs

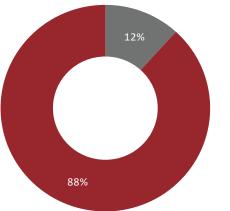
Recent U.S. Technology IPO Activity (by Offering Size)¹



- Technology IPO activity dipped slightly in Q4 to six IPOs after an active Q3. Overall, listing activity for 2020 remained in line with 2019 activity.
- Notable Q4 2020 IPOs include McAfee, Doordash, and Airbnb.
- The pipeline of technology IPOs remains strong with companies including Affirm, Coinbase, and UiPath as well as SAP's spinout of Qualtrics planning on listing in 2021.

Offering Size at IPO (LTM)¹



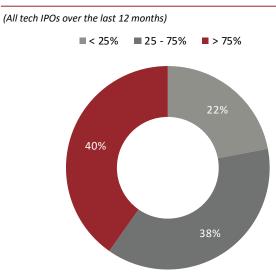


Market Cap at IPO (LTM)¹

71%

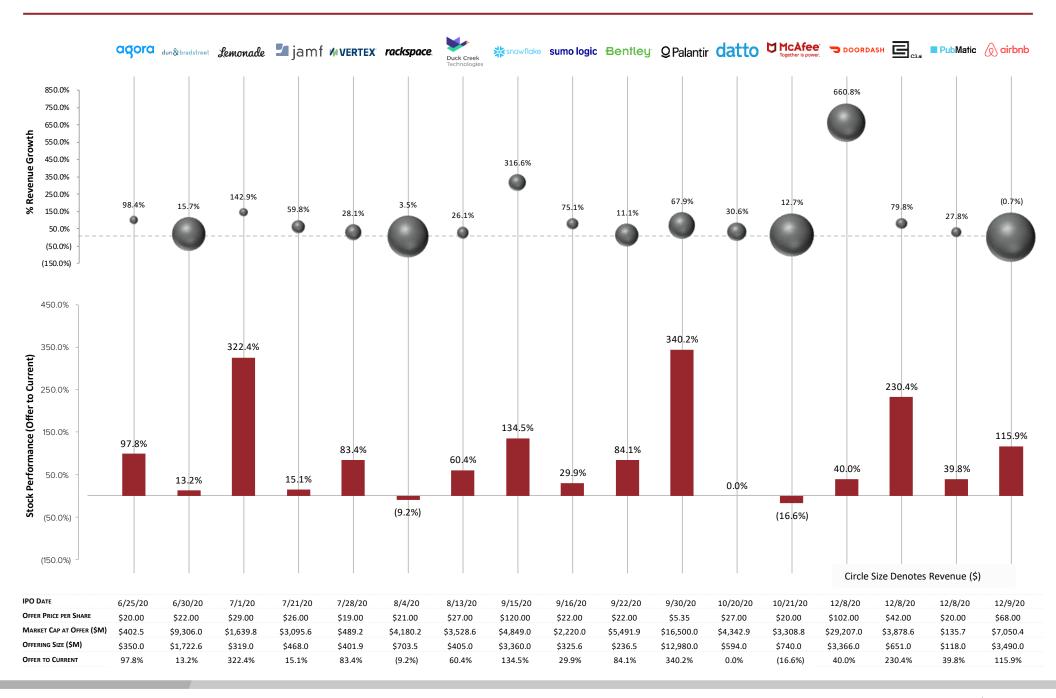


Revenue Growth (1YR Prior to IPO)¹

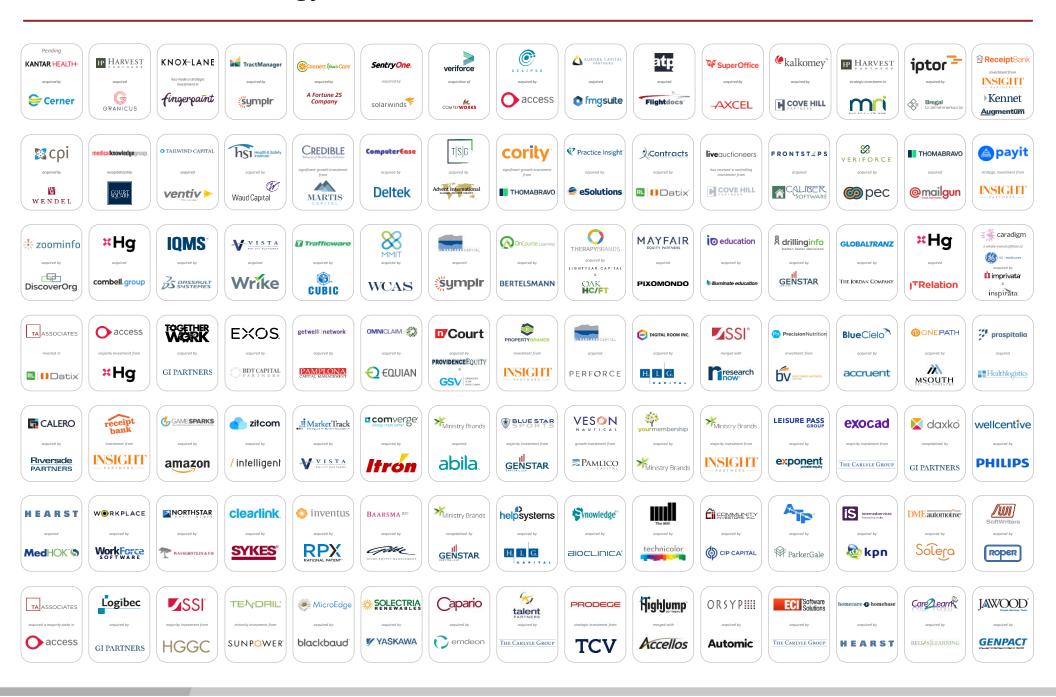


17

Key Performance Metrics for Recent Software IPOs¹



Select HW Technology Transactions



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Appendix: Software Sector Public Company Universe¹

APPLICATION SOFTWARE

		Software Bellwethers	Microsoft	Alphabet	Adobe	Salesforce	Oracle	Cisco	SAP	IBM	HPE	
		Communication Software	Zoom	Twilio	Slack	NICE	Nuance	Agora	Synchronoss			
		Enterprise Software	Adobe	Oracle	SAP	IBM	Intuit	ADP	Amadeus	Constellation	OpenText	Sage
	ITAL	Human Capital Management (HCM)	ADP	Workday	Paychex	Paycom	Ceridian	Paylocity	Cornerstone	Benefitfocus		
RE	HORIZONTAL	Marketing Software	Adobe	Salesforce	HubSpot	ZoomInfo	Acxiom	PubMatic	Criteo	ChannelAdvisor		
TWA	HOR	PLM & Engineering Software	Autodesk	Dassault	Synopsys	Cadence	Hexagon AB	Ansys	Trimble	PTC	Bentley	Nemetschek
SOF		PLM & Engineering Software (cont'd)	Altair									
TION		Supply Chain & Logistics Software	Coupa	Trimble	C3.ai	Wisetech	Manhattan	Descartes	SPS	Kinaxis	American	
APPLICATION SOFTWARE		Energy Software	Trimble	AVEVA	AspenTech	ltron	PSI					
AP	AL	Financial Software	Square	Fiserv	MSCI	SS&C	Black Knight	Jack Henry	Blackline	Q2 Holdings	Duck Creek	Vertex
	VERTICAL	Financial Software (Con't)	Envestnet	Oracle FSS								
	VE	Healthcare IT (HCIT)	Veeva	Cerner	Inovalon	Phreesia	Allscripts	Health Catalyst	Evolent Health			
		EdTech / Public Sector Software	Constellation	Tyler Tech	2U	Blackbaud	NIC	Stride				
		Large-Cap SaaS (≥ \$3Bn Mkt Cap)	Salesforce	ServiceNow	Zoom	Atlassian	Workday	CrowdStrike	DocuSign	Veeva	RingCentral	Paycom
		Large-Cap SaaS (cont'd)	Coupa	Check Point	HubSpot	ZenDesk	Xero	Avalara	Dynatrace	Five9	Guidewire	Anaplan
SAAS		Large-Cap SaaS (cont'd)	Smartsheet	Proofpoint	Q2 Holdings	CyberArk	AppFolio	Alarm.Com	Medallia	Qualys	Rapid7	Workiva
		Small-Cap SaaS (< \$3Bn Mkt Cap)	Box	Cornerstone	Yext	Domo	Eventbrite	Upland	Model N	Talend	Ebix	Benefitfocus
		Small-Cap SaaS (cont'd)	Castlight Health									
		Data & Analytics	Snowflake	Palantir	Verisk	Datadog	Splunk	Pegasystems	Dun & Bradstreet	Verint	MicroStrategy	Inovalon
		Data & Analytics (cont'd)	Teradata	PROS Holdings	Talend							
		IT Operations Management	ServiceNow	VMware	Arista	Citrix	Dynatrace	F5 Networks	Fastly	SolarWinds	Datto	New Relic
URE		IT Operations Management (cont'd)	PagerDuty	Software AG	Progress	NetScout	Micro Focus	Radware				
UCT	VAR	Data Storage	Snowflake	NetApp	Dropbox	Iron Mountain	Nutanix	Pure Storage	Box	CommVault		
INFRASTRUCTURE	OFIV	IT Security	Cisco	CrowdStrike	Palo Alto	VeriSign	Fortinet	Cloudflare	Check Point	Trend Micro	Proofpoint	CyberArk
INFR	<u>s</u>	IT Security (cont'd)	FireEye	Varonis	SailPoint	Qualys	Rapid7	Mimecast	McAfee	Ping	SecureWorks	Tufin
		IT Security (cont'd)	Cheetah Mobile	Symantec								

		Enterprise	Market	% of 52	1-Year Stock	3-Year Stock	Revenue	e Growth	LTM EBITDA		Enterpri	se Value /		Price /	
Company	Ticker	Value (\$mm)	Cap (\$mm)	Week High	Performance	Performance	LTM	NTM	Margin	LTM Rev.	NTM Rev.	LTM EBITDA	NTM EBITDA	Earnings	
				SO	FTWARE B	ELLWETHE	ERS								Software
Microsoft Corporation	MSFT	\$1,626,873	\$1,681,606	95.5%	41.0%	160.0%	13.3%	10.1%	46.3%	11.1x	10.0x	23.9x	22.3x	35.4x	Bellwethers
Alphabet Inc.	GOOG.L	1,079,780	1,185,281	95.1%	30.9%	66.4%	10.7%	19.0%	28.0%	6.3x	5.3x	22.5x	15.0x	33.2x	Communication
Adobe Inc.	ADBE	238,633	239,917	93.2%	51.6%	185.4%	15.2%	18.1%	37.4%	18.5x	15.7x	49.6x	31.7x	45.6x	
salesforce.com, inc.	CRM	200,445	203,714	78.2%	36.8%	117.7%	28.0%	18.8%	10.0%	9.9x	8.3x	NM	29.3x	57.3x	Enterprise
Oracle Corporation	ORCL	223,458	190,450	97.7%	22.1%	36.8%	(0.5%)	3.0%	43.8%	5.7x	5.5x	12.9x	11.0x	18.3x	Enterprise
Cisco Systems, Inc.	CSCO	174,669	189,092	89.0%	(6.7%)	16.8%	(7.5%)	3.0%	31.7%	3.6x	3.5x	11.5x	9.8x	18.1x	
SAP SE	SAP	163,964	156,184	74.8%	(10.9%)	14.7%	8.2%	(0.1%)	33.3%	4.9x	4.9x	14.7x	14.7x	24.2x	НСМ
IBM Corporation	IBM	167,084	112,166	79.3%	(6.1%)	(18.0%)	(2.7%)	(0.6%)	20.9%	2.2x	2.2x	10.6x	9.9x	14.2x	
Hewlett Packard Enterprise Co.	HPE	28,171	15,328	73.2%	(25.3%)	(17.5%)	(7.4%)	1.1%	15.9%	1.0x	1.0x	6.6x	5.5x	NM	Marketing
Median		\$200,445	\$190,450	89.0%	22.1%	36.8%	8.2%	3.0%	31.7%	5.7x	5.3x	13.8x	14.7x	28.7x	
				СОМ	MUNICAT	ION SOFTV	VARE								PLM & Engineering
Zoom Video Communications, Inc.	ZM	\$94,674	\$96,476	57.3%	395.8%	NA	262.3%	72.6%	22.9%	48.4x	28.0x	NM	NM	NM	
Twilio, Inc.	TWLO	48,481	51,117	90.4%	244.4%	1,334.3%	53.3%	32.7%	NM	31.4x	23.6x	NM	NM	NM	SCM & Logistics
Slack Technologies, Inc.	WORK	23,690	24,339	95.7%	87.9%	NA	46.2%	28.6%	NM	28.4x	22.1x	NM	NM	NM	
NICE Systems Ltd.	TASE:NICE	17,022	17,562	98.3%	68.0%	181.1%	5.7%	7.1%	26.6%	10.4x	9.7x	38.9x	27.5x	86.3x	Energy
Nuance Communications, Inc.	NUAN	13,861	12,561	98.1%	147.3%	169.7%	(2.8%)	(8.3%)	16.5%	9.4x	10.2x	NM	43.0x	NM	
Agora, Inc.	NasdaqGS:AP	3,394	4,029	57.8%	NA	NA	173.5%	20.6%	3.1%	28.4x	23.6x	NM	NM	NM	Financial
Synchronoss Technologies, Inc.	SNCR	460	198	72.2%	(1.1%)	(47.4%)	4.2%	(12.7%)	NM	1.5x	1.7x	NM	19.3x	NM	
Median		\$17,022	\$17,562	90.4%	117.6%	175.4%	46.2%	20.6%	19.7%	28.4x	22.1x	38.9x	27.5x	86.3x	НСІТ
				FI	ITERPRISE	SOFTWA	RF								EdTech /
Adobe Inc.	ADBE	\$238,633	\$239,917	93.2%	51.6%	185.4%	15.2%	18.1%	37.4%	18.5x	15.7x	49.6x	31.7x	45.6x	Public Sector
Oracle Corporation	ORCL	223,458	190,450	97.7%	22.1%	36.8%	(0.5%)	3.0%	43.8%	5.7x	5.5x	12.9x	11.0x	18.3x	Large-Cap
SAP SE	SAP	163,964	156,184	74.8%	(10.9%)	14.7%	8.2%	(0.1%)	33.3%	4.9x	4.9x	14.7x	14.7x	24.2x	SaaS
IBM Corporation	IBM	167,084	112,166	79.3%	(6.1%)	(18.0%)	(2.7%)	(0.6%)	20.9%	2.2x	2.2x	10.6x	9.9x	14.2x	
Intuit Inc.	INTU	101,697	104,856	97.9%	45.0%	140.7%	13.0%	18.7%	32.7%	13.0x	10.9x	39.7x	30.6x	53.3x	Small-Cap SaaS
Automatic Data Processing, Inc.	ADP	76,361	75,557	96.6%	3.3%	50.4%	1.9%	1.7%	26.2%	5.2x	5.2x	20.0x	21.2x	30.4x	
Amadeus IT Group	BME:AMS	36,414	32,804	75.6%	(18.2%)	(0.9%)	(40.2%)	12.5%	22.2%	10.2x	9.1x	45.8x	32.6x	NM	Data &
Constellation Software Inc.	TSX:CSU	27,564	27,490	92.4%	31.1%	116.9%	13.9%	14.8%	16.6%	7.2x	6.3x	43.2x	21.5x	72.3x	Analytics
Open Text Corporation	OTEX	14,936	12,319	95.0%	3.2%	27.4%	11.0%	1.0%	30.4%	4.6x	4.6x	15.3x	12.1x	46.8x	IT Operations
Sage Group plc	LSE:SGE	8,925	8,708	73.2%	(22.3%)	(27.1%)	3.3%	3.7%	29.2%	3.6x	3.5x	12.4x	15.8x	21.7x	
Median		\$89,029	\$90,207	92.8%	3.2%	32.1%	5.8%	3.4%	29.8%	5.5x	5.3x	17.7x	18.5x	30.4x	Data Storage
															Data Storage

IT Security

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		Enterprise	Market	% of 52	1-Year Stock	3-Year Stock	Revenu	e Growth	LTM EBITDA		Enterpri	se Value /		Price /	
Company	Ticker	Value (\$mm)	Cap (\$mm)	Week High	Performance	Performance	LTM	NTM	Margin	LTM Rev.	NTM Rev.	LTM EBITDA	NTM EBITDA	Earnings	
			HU		PITAL MAN	IAGEMENT	SOFT	WARE							Software Bellwethers
Automatic Data Processing, Inc.	ADP	\$76,361	\$75,557	96.6%	3.3%	50.4%	1.9%	1.7%	26.2%	5.2x	5.2x	20.0x	21.2x	30.4x	Bellwethers
Workday, Inc.	WDAY	56,985	57,703	92.5%	45.7%	135.5%	21.0%	15.2%	1.2%	13.7x	11.9x	NM	49.7x	NM	Communicatio
Paychex, Inc.	PAYX	33,631	33,604	93.2%	9.5%	36.9%	(1.5%)	3.3%	40.5%	8.5x	8.2x	20.9x	20.0x	31.7x	<u> </u>
Paycom Software, Inc.	PAYC	25,960	26,064	96.0%	70.8%	463.0%	17.2%	16.9%	29.7%	31.9x	27.3x	NM	NM	158.5x	Enterprise
Ceridian HCM Holding, Inc.	CDAY	16,205	15,750	95.2%	57.0%	NA	5.6%	8.8%	11.3%	19.3x	17.7x	NM	NM	NM	Litterprise
Paylocity Holding Corp.	PCTY	11,109	11,170	94.3%	70.4%	336.6%	15.5%	15.8%	15.1%	19.5x	16.8x	NM	NM	177.3x	
Cornerstone Ondemand, Inc.	CSOD	3,995	2,845	68.3%	(24.8%)	24.7%	21.0%	20.1%	12.7%	5.8x	4.9x	46.1x	14.6x	NM	нсм
Benefitfocus, Inc.	BNFT	639	466	64.9%	(34.0%)	(46.4%)	(1.5%)	(0.3%)	1.8%	2.3x	2.3x	NM	15.5x	NM	
Median		\$21,082	\$20,907	93.8%	27.6%	50.4%	10.5%	12.0%	13.9%	11.1x	10.0x	20.9x	20.0x	95.1x	Marketing
				М	ARKETING	SOFTWA	۶E								
Adobe Inc.	ADBE	\$238,633	\$239,917	93.2%	51.6%	185.4%	15.2%	18.1%	37.4%	18.5x	15.7x	49.6x	31.7x	45.6x	PLM & Engineeri
salesforce.com, inc.	CRM	200,445	203,714	78.2%	36.8%	117.7%	28.0%	18.8%	10.0%	9.9x	8.3x	NM	29.3x	57.3x	
HubSpot, Inc.	HUBS	17,795	18,192	94.3%	150.1%	348.5%	29.2%	23.6%	NM	21.8x	17.6x	NM	NM	NM	SCM & Logistics
ZoomInfo Technologies Inc.	ZI	9,071	8,130	74.9%	NA	NA	76.0%	32.5%	14.4%	21.2x	16.0x	NM	32.6x	NM	
Acxiom Holdings, Inc.	ACXM	4,220	4,853	NA	NA	NA	24.5%	14.1%	NM	10.2x	9.0x	NM	NM	NM	Energy
PubMatic, Inc.	PUBM	1,363	1,337	72.2%	NA	NA	NM	NM	19.4%	10.7x	NM	NM	NM	112.3x	<u> </u>
Criteo SA	CRTO	925	1,236	91.2%	18.3%	(21.2%)	(9.4%)	(62.5%)	10.8%	0.4x	1.2x	4.1x	4.3x	18.1x	Financial
Channeladvisor Corporation	ECOM	409	463	71.6%	76.8%	77.6%	7.4%	5.6%	17.3%	2.9x	2.8x	16.9x	12.2x	25.6x	<u> </u>
Marin Software, Inc.	MRIN	24	18	35.4%	46.4%	(81.6%)	(36.2%)	NM	NM	0.7x	NM	NM	NM	NM	нсіт
Median		\$4,220	\$4,853	76.6%	49.0%	97.6%	19.8%	18.1%	15.8%	10.2x	9.0x	16.9x	29.3x	45.6x	
				PLM &	ENGINEE	RING SOFT	WARE								EdTech / Public Sector
Autodesk, Inc.	ADSK	\$67,624	\$67,141	99.4%	66.4%	191.3%	17.3%	13.5%	18.9%	18.5x	16.3x	NM	45.4x	156.6x	
Dassault Systemes SA	ENXTPA:DSY	55,716	53,106	98.7%	13.4%	87.5%	22.6%	12.2%	22.6%	10.7x	9.6x	47.5x	29.0x	96.2x	Large-Cap SaaS
Synopsys, Inc.	SNPS	39,105	39,672	99.3%	86.2%	204.1%	9.7%	9.4%	22.1%	10.6x	9.7x	48.0x	29.5x	59.7x	
Cadence Design Systems, Inc.	CDNS	37,445	38,055	99.7%	96.7%	226.2%	9.4%	12.1%	28.5%	14.8x	13.2x	NM	35.3x	35.3x	Small-Cap
Hexagon AB	OM:HEXA B	35,891	33,556	98.8%	42.8%	82.5%	4.7%	10.7%	27.4%	8.1x	7.3x	29.5x	19.6x	46.4x	SaaS
ANSYS, Inc.	ANSS	30,945	31,245	98.4%	41.3%	146.5%	6.8%	14.7%	32.8%	20.0x	17.5x	NM	37.5x	81.3x	Data &
Trimble Inc.	TRMB	18,303	16,704	98.3%	60.2%	64.3%	(2.6%)	3.9%	20.5%	5.8x	5.6x	28.4x	23.9x	34.2x	Analytics
PTC Inc.	РТС	14,840	13,954	98.2%	59.7%	96.8%	16.1%	8.4%	20.9%	10.2x	9.4x	48.6x	29.7x	106.8x	
Bentley Systems	BSY	11,502	11,002	98.4%	NA	NA	13.5%	8.1%	27.6%	14.7x	13.6x	NM	42.1x	99.3x	IT Operations
Nemetschek SE	XTRA:NEM	8,675	8,534	81.2%	2.7%	142.1%	18.0%	13.9%	22.4%	12.5x	11.0x	NM	37.2x	73.1x	
Altair Engineering Inc.	ALTR	4,291	4,285	97.0%	62.0%	143.2%	5.1%	2.9%	6.3%	9.3x	9.1x	NM	NM	NM	Data Storage
Median	ALIN	\$30,945	\$31,245	98.4%	59.9%	142.7%	9.7%	10.7%	22.4%	10.7x	9.7x	47.5x	32.5x	77.2x	<u> </u>

OUT LET CITATION TATLE L'OUTRALE UNALL UNALL <th col<="" th=""><th></th><th></th><th>Enterprise</th><th>Market</th><th>% of 52</th><th>1-Year Stock</th><th>3-Year Stock</th><th>Revenu</th><th>e Growth</th><th>LTM EBITDA</th><th></th><th>Enterpri</th><th>se Value /</th><th></th><th>Price /</th><th></th></th>	<th></th> <th></th> <th>Enterprise</th> <th>Market</th> <th>% of 52</th> <th>1-Year Stock</th> <th>3-Year Stock</th> <th>Revenu</th> <th>e Growth</th> <th>LTM EBITDA</th> <th></th> <th>Enterpri</th> <th>se Value /</th> <th></th> <th>Price /</th> <th></th>			Enterprise	Market	% of 52	1-Year Stock	3-Year Stock	Revenu	e Growth	LTM EBITDA		Enterpri	se Value /		Price /	
Object 12 - 16 (11) Varies 100 - 10 - 10 - 10 - 10 - 10 - 10 - 10	Company	Ticker	Value (\$mm)	Cap (\$mm)	Week High	Performance	Performance	LTM	NTM	Margin	LTM Rev.	NTM Rev.	LTM EBITDA	NTM EBITDA	Earnings		
Coups Stavers, Inc. COUP S24,461 91.8% 913.7% 98.5% 8.6% 27.3% NM MM 93.5% NM N				SL	JPPLY CH		OGISTICS	SOFTV	VARE							Software	
C3.a), Inc. NYSEAI 13.427 13.299 75.4% NA NA NM	Coupa Software, Inc.	COUP	\$24,618	\$24,461	91.8%	131.7%	985.6%	38.6%	27.3%	NM	NM	39.5x	NM	NM	NM	Bellwethers	
Wistech Global Ltd. ASK.WTC 7,507 7,646 91.2% 31.6% 117.3% 21.4% 30.5% 23.6% 25.3x 19.4x NM NM 66.9x Ent Mainhat Associates, Inc. MANH 6.50 6.682 97.3% 31.4% 10.8% 10.6% 20.3% 11.1x 11.1x NM NM 86.9x 92.9x Social Science Systems Strutum Strutu	Trimble Inc.	TRMB	18,303	16,704	98.3%	60.2%	64.3%	(2.6%)	3.9%	20.5%	5.8x	5.6x	28.4x	23.9x	34.2x	Communication	
Manhatlan Associates, Inc. MANH 6,550 6,682 97.3% 31.9% 112.3% (2.8%) (0.6%) 20.3% 11.1x 11.1x NM NM 80.1x Descartes Systems Groupine. TSKD56 4.830 4.936 90.4% 34.1% 108.3% 8.6% 11.1% 38.2% 14.2x 37.3k 31.4% 105.5% SpSCommere, Inc. SPSC 3.591 3.816 80.2% 80.3% 134.8% 30.0% 7.5% 19.6% 16.6x 14.9x NM NM 164.9x NM American Software, Inc. MSXMX 3.615 56.68 90.4% NA NA NA NA 17.3% 9.9% 20.5% 5.6x 4.1x A0.x NM 33.7x 85.3x PIM.8x Median Stopso 56,582 51.6x 5.6x 2.8.4x 23.9x 34.2x Ad.2x Ad.	C3.ai, Inc.	NYSE:AI	13,427	13,299	75.4%	NA	NA	NM	NM	NM	NM	NM	NM	NM	NM	<u> </u>	
Manhatn Associates, Inc. MANH 6,550 5,652 97.3% 31.9% 11.2% (0.6%) 20.3% 11.1x 11.1x NM NM 80.1x Descartes Systems Group Inc. TSK:DSG 4.830 90.4% 34.1% 100.3% 8.6% 11.1% 38.2% 14.2x 12.2x 37.3x 31.4% 106.3% 37.3x 31.4% 106.3% 11.3% 11.3% 11.4% NM NM NM 80.1x 11.3% 11.3% 11.4% 11.3% 37.3x 31.4% 106.3% 11.3% 11.3% 10.4% NM NM NM 16.9% 11.3% 10.4% NM NM 16.9% 37.3x 33.7% 8.6% 12.5% 13.0% 11.3% 10.6% 16.0% 14.9x NM NM 16.9% 5.5% 5.6% 5.6% 5.8% 5.6% 2.8.4 2.3.9% 4.2.2% 4.2.8 32.5% 11.1% NM 35.3% 10.4% 10.6% 10.6% 10.6% 10.6% 10.6% 10.6% 10.6% 10.6% 10.6% 10.6% 10.6% 10.6% <	Wisetech Global Ltd.	ASX:WTC	7,507	7,646	91.2%	31.6%	117.3%	21.4%	30.5%	23.6%	25.3x	19.4x	NM	NM	68.9x	Enterprise	
SPSC mmere, Inc. SPSC 3,594 3,834 97.3% 95.9% 347.0% 11.2% 14.3% 21.6% 11.9x 10.4x NM 38.6x 92.9x Kinaxis, Inc. TSXKXS 3,615 3,816 80.2% 80.3% 134.8% 30.0% 7.6% 19.6% 16.0x 14.9x NM NM 164.9x NM NM 164.9x NM NM 164.9x NM NM 33.7x 85.3x MM Median 56,550 56,682 NA NA NA 5.9% 9.3% 20.5% 5.8x 5.6x 28.4x 23.9x 34.2x AveXAGroup lok LSEAV 12,546 59.7% (31.2%) NA 0.0% 17.9% 12.5x 11.0x NM 35.5x NM Aspen Technology, Inc. AZPN 8,973 8,628 91.2% 17.7% 96.8% (7.9%) 12.4% 3.0% 2.1x 2.0x 2.6x 2.5x NM M MA 3.5x NM MA 1.5x 1.5x 1.5x 1.5x 1.5x 1.5x	Manhattan Associates, Inc.	MANH	6,550	6,682	97.3%	31.9%	112.3%	(2.8%)	(0.6%)	20.3%	11.1x	11.1x	NM	NM	80.1x	Litterprise	
SPS Commerce, Inc. SPS C 3,394 9,73% 95,73% 947,0% 11.2% 14.3% 21.6% 11.9x 10.4x NM 38.6x 92.9x American Software, Inc. AMSWA 467 50 NA NA NA 57.50 0.6% 6.8% 4.1x 4.0x NM 33.7x 85.3x Median Median S6,550 S6,682 91.5% 60.2% 11.73% 9.9% 9.3% 20.5% 11.9x 10.4x NM M3.7x 85.3x Median S6,550 56,682 91.5% 60.2% 61.3% (2.6%) 3.9% 9.3% 20.5% 11.9x 10.4x NM 33.6x 20.5% 33.6x 28.4x 23.5x 85.3x NM NM 35.5x NM 34.2x NM NM 35.5x NM 35.5x NM 36.5x 20.7x 43.4x 20.5% 11.0x NM 35.5x NM NM 35.5x NM S6.5x 20.5x 11.0x NM 35.5x NM NM S6.5x 20.7x 11.0x <	Descartes Systems Group Inc.	TSX:DSG	4,830	4,936	90.4%	34.1%	108.3%	8.6%	11.1%	38.2%	14.2x	12.8x	37.3x	31.4x	106.5x		
Annerican Software, Inc. AMSWA 467 560 NA NA NA S.7% 0.6% 6.8% 4.1x 4.0x NM 33.7x 85.3x Madian Median S6,550 S6,682 91.5% 60.2% 117.3% 9.9% 9.3% 20.5% 11.9x 12.0x 32.8x 32.5x 85.3x PIM & Median S6,550 S6,682 91.5% 60.2% 61.3% (2.6%) 3.9% 20.5% 5.8% 2.8% 23.5% 85.3x PIM & Composition S18,003 S18,003 82.8 91.2% 7.7% 96.8% (7.9%) 21.4% 43.1% 15.6% 12.3x 36.3x 20.7% 42.3x Median XPIN & 8,973 8.828 91.2% 7.7% 96.8% (7.9%) 27.4% 43.1% 15.6% 12.3x 36.3x 20.7% 42.3x 11.0% NM 33.6% 20.7% 42.3x 13.6% 30.5% 17.4% 16.8% 27.3% 16.8% 27.7% 13.6% 8.5% 17.9% 16.6% 26.5% 27.7%	SPS Commerce, Inc.	SPSC	3,594	3,834	97.3%	95.9%	347.0%	11.2%	14.3%	21.6%	11.9x	10.4x	NM	38.6x	92.9x	НСМ	
Allentar Solitivare, Inc. ANS/WA Abs/WA Abs/MA Abs/MA NA NA S.% 0.5% 0.5% 4.1x 4.0x NM 33.7x 83.5x Median 56,682 91.5% 60.2% 61.3% 9.9% 9.9% 9.3% 20.5% 11.3x 12.0x 32.8x 32.5x 85.xx ENERCY SOFTWARE Trimble Inc. TRMB \$18,303 \$16,704 98.3% 60.2% 64.3% (2.6%) 3.9% 20.5% 5.8x 5.6x 28.4x 23.9x 34.2x SCM A AVEVA Group pic LSE.AVV 12,552 12,546 59.7% (31.2%) NA (0.9%) 14.0% 17.3% 15.6x 12.3x 36.3x 20.7x 42.3x Md AVEVA Group pic LSE.AVV 12,52 12,546 87.8% 17.3% 31.9% 10.8% 8.5% 9.0% 1.7x 1.6x 18.9x 13.6x 30.5x MM FINAMCIAL SOFTWARE FINAMCIAL SOFTWARE Sigaze, Inc. Sig.973 <t< td=""><td>Kinaxis, Inc.</td><td>TSX:KXS</td><td>3,615</td><td>3,816</td><td>80.2%</td><td>80.3%</td><td>134.8%</td><td>30.0%</td><td>7.6%</td><td>19.6%</td><td>16.0x</td><td>14.9x</td><td>NM</td><td>NM</td><td>164.9x</td><td></td></t<>	Kinaxis, Inc.	TSX:KXS	3,615	3,816	80.2%	80.3%	134.8%	30.0%	7.6%	19.6%	16.0x	14.9x	NM	NM	164.9x		
ENERGY SOFTWARE PIM & Trimble Inc. TRMB \$18,303 \$16,704 98.3% 60.2% 64.3% (2.6%) 3.9% 20.5% 5.8x 5.6x 28.4x 23.9x 34.2x AVEVA Group pic LSEAVV 12,552 12,546 59.7% (31.2%) NA (0.9%) 14.0% 17.9% 12.5x 11.0x NM 35.5x NM ASpen Technology, Inc. AZPN 8,973 8,828 91.2% 7.7% 96.8% (7.9%) 27.4% 43.1% 15.6x 12.3x 36.3x 20.7x 42.3x Itron, Inc. ITRI 4,719 3,874 98.1% 14.2% 40.6% (7.5%) 13.3% 8.0% 2.1x 2.0x 26.0x 21.5x NM SplAtiengesellschaft XTRA:PSAN 444 468 87.8% 17.3% 15.9% 8.8x 5.6x 2.7x 21.5x 34.2x Square, Inc. FIV 97,655 76,336 91.1% (1.5%) </td <td>American Software, Inc.</td> <td>AMSWA</td> <td>467</td> <td>560</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>5.7%</td> <td>0.6%</td> <td>6.8%</td> <td>4.1x</td> <td>4.0x</td> <td>NM</td> <td>33.7x</td> <td>85.3x</td> <td>Marketing</td>	American Software, Inc.	AMSWA	467	560	NA	NA	NA	5.7%	0.6%	6.8%	4.1x	4.0x	NM	33.7x	85.3x	Marketing	
ENERGY SOFTWARE Trimble Inc. TRMB \$18,303 \$16,704 98.3% 60.2% 64.3% (2.6%) 3.9.% S5.8 S6.8.4 23.9.x 34.2x KMACK Group plc ASPEN Group plc LSEAVV 12,552 12,546 59.7% (31.2%) NA (0.9%) 14.0% 17.9% 12.5x 11.0x NM 35.5x NM Aspen Technology, Inc. AZPN 8,973 8,828 91.2% 7.7% 96.8% (7.9%) 27.4% 43.1% 15.6x 12.3x 36.3x 20.7x 42.3x MM MI PSI Aktiongesellschaft XTRA,PSAN 444 468 87.8% 17.3% 31.9% 10.8% 8.5% 9.0% 1.7x 1.6x 18.9x 13.6x 30.5x MM	Median		\$6,550	\$6,682	91.5%	60.2%	117.3%	9.9%	9.3%	20.5%	11.9x	12.0x	32.8x	32.5x	85.3x		
AVEVA Group pic LSE-AVV 12,552 12,546 59.7% (31.2%) NA (0.9%) 14.0% 17.9% 12.5x 11.0x NM 35.5x NM Aspen Technology, Inc. AZPN 8,973 8,828 91.2% 7.7% 96.8% (7.9%) 27.4% 43.1% 15.6x 12.3x 36.3x 20.7x 42.3x Itron, Inc. ITRI 4,719 3,874 98.1% 14.2% 40.6% (7.5%) 1.3% 8.0% 2.1x 2.0x 26.0x 21.5x NM M 95.4ktiengesellschaft XTRA-PSAN 444 468 87.8% 17.3% 31.9% 10.8% 8.5% 9.0% 1.7x 1.6x 18.9x 13.6x 30.5x M						ENERGY S	OFTWARE									PLM & Engineering	
AVEVA Group pic LSEAW 12/552 12/54b 39/7 (31.2%) NA (0.9%) 14.0% 17/9% 12.5x 11.0x NM 35.5x NM Aspen Technology, Inc. AZPN 8,973 8,828 91.2% 7.7% 96.8% (7.9%) 27.4% 43.1% 15.6x 12.3x 36.3x 20.7x 42.3x Me PSI Aktiengeselischaft XTRA.PSAN 444 468 87.8% 17.3% 31.9% 10.8% 8.5% 9.0% 1.7x 1.6x 18.9x 13.6x 30.5x Median 58,973 58,828 91.2% 14.2% 52.5% (2.6%) 8.5% 9.0% 1.7x 1.6x 18.9x 13.6x 30.5x Median S8,973 58,828 91.2% 14.2% 52.5% (2.6%) 8.5% 17.9% 5.8x 5.6x 27.2x 21.5x 33.6x 30.5x Median 58,973 58,828 91.2% 14.2% 52.5% (2.6%) 8.5% 0.2% 12.8x 7.7x NM NM MM MA 65.1% <td>Trimble Inc.</td> <td>TRMB</td> <td>\$18,303</td> <td>\$16,704</td> <td>98.3%</td> <td>60.2%</td> <td>64.3%</td> <td>(2.6%)</td> <td>3.9%</td> <td>20.5%</td> <td>5.8x</td> <td>5.6x</td> <td>28.4x</td> <td>23.9x</td> <td>34.2x</td> <td></td>	Trimble Inc.	TRMB	\$18,303	\$16,704	98.3%	60.2%	64.3%	(2.6%)	3.9%	20.5%	5.8x	5.6x	28.4x	23.9x	34.2x		
ITRI 4,719 3,874 98.1% 14.2% 40.6% (7.5%) 1.3% 8.0% 2.1x 2.0x 26.0x 21.5x NM IE PSI Aktiengesellschaft XTRA:PSAN 444 468 87.8% 17.3% 31.9% 10.8% 8.5% 9.0% 1.7x 1.6x 18.9x 13.6x 30.5x Median S8,973 \$8,973 \$8,828 91.2% 14.2% 52.5% (2.6%) 8.5% 9.0% 1.7x 1.6x 18.9x 13.6x 30.5x Fir Median SQ \$97,929 \$98,142 89.4% 247.9% 527.7% 76.6% 65.5% 0.2% 12.8x 7.7x NM NM NM Fir Square, Inc. FISV 97,655 76,336 91.1% (1.5%) 73.7% 95.8% 4.6% 32.1% 6.5x 6.2x 20.2x 15.9x 84.3x MG MG MM S5x 55.x 55.4x 14.8% 13.6x 32.7x Publicitation SS& Crechnologies Holdings, Inc. SKFS 16,623 13,733 </td <td>AVEVA Group plc</td> <td>LSE:AVV</td> <td>12,552</td> <td>12,546</td> <td>59.7%</td> <td>(31.2%)</td> <td>NA</td> <td>(0.9%)</td> <td>14.0%</td> <td>17.9%</td> <td>12.5x</td> <td>11.0x</td> <td>NM</td> <td>35.5x</td> <td>NM</td> <td>SCM & Logistics</td>	AVEVA Group plc	LSE:AVV	12,552	12,546	59.7%	(31.2%)	NA	(0.9%)	14.0%	17.9%	12.5x	11.0x	NM	35.5x	NM	SCM & Logistics	
HND 4,713 3,674 9,6174 14.2.% 40.0.% (7.3.%) 1.3.% 6.0.% 2.1.X 2.0.X 20.0.X 21.3.X HM PSI Attiengesellschaft XTRA.PSAN 444 468 87.8% 17.3% 31.9% 10.8% 8.5% 9.0% 1.7.X 1.6x 18.9x 13.6x 30.5x 30.5x Median \$8,973 \$8,828 91.2% 14.2% \$2.5% (2.6%) 8.5% 9.0% 1.7.X 1.6x 18.9x 13.6x 30.5x 30.5x Square, Inc. \$100, 97,929 \$98,142 89.4% 247.9% \$27.7% 76.6% 65.5% 0.2% 12.8x 7.7x NM NM MM SQuare, Inc. FISV 97,655 76,336 91.1% (1.5%) 73.7% 95.8% 4.6% 32.1% 6.5x 6.2x 20.2x 15.9x 84.3x Ed MSCI Inc. MSCI 39,252 37,015 99.9% 73.0% 25.9% 9.6% 10.2% 57.5x 5.4x 14.8x 13.6x 32.7x Publ P	Aspen Technology, Inc.	AZPN	8,973	8,828	91.2%	7.7%	96.8%	(7.9%)	27.4%	43.1%	15.6x	12.3x	36.3x	20.7x	42.3x		
Median \$8,973 \$8,828 91.2% 14.2% 52.5% (2.6%) 8.5% 17.9% 5.8x 5.6x 27.2x 21.5x 34.2x FINANCIAL SOFTWARE Square, Inc. SQ \$97,929 \$98,142 89.4% 247.9% 527.7% 76.6% 65.5% 0.2% 12.8x 7.7x NM NM NM Square, Inc. FISV 97,655 76,336 91.1% (1.5%) 73.7% 95.8% 4.6% 32.1% 6.5x 6.2x 20.2x 15.9x 84.3x MSCI Inc. MSCI 39.252 37,015 99.9% 73.0% 252.9% 9.6% 10.2% 55.2% 23.7x 21.5x 42.9x 37.3x 65.1x SS&C Technologies Holdings, Inc. SSNC 25,575 18,621 98.3% 18.5% 79.7% 2.8% 1.0% 37.1% 5.5x 5.4x 14.8x 13.6x 32.7x Jack Henry & Associates, Inc. JKHY 12,237 12,362	Itron, Inc.	ITRI	4,719	3,874	98.1%	14.2%	40.6%	(7.5%)	1.3%	8.0%	2.1x	2.0x	26.0x	21.5x	NM	Energy	
FINANCIAL SOFTWARE Square, Inc. SQ \$97,929 \$98,142 89.4% 247.9% \$27.7% 76.6% 65.5% 0.2% 12.8x 7.7x NM NM NM Fiserv, Inc. FISV 97,655 76,336 91.1% (1.5%) 73.7% 95.8% 4.6% 32.1% 6.5x 6.2x 20.2x 15.9x 84.3x MSCI Inc. MSCI 39,252 37,015 99.9% 73.0% 252.9% 9.6% 10.2% 55.2% 23.7x 21.5x 42.9x 37.3x 65.1x SS& C Technologies Holdings, Inc. SSNC 25,575 18,621 98.3% 18.5% 79.7% 2.8% 1.0% 37.1% 5.5x 5.4x 14.8x 13.6x 32.7x Black Knight Financial Services, Inc. JKHY 12,237 12,362 80.6% 11.2% 38.5% 7.1% 5.0% 26.1% 7.2x 6.8x 27.4x 21.7x 41.4x Black Knight Financial Services, Inc. BL 7,533 7,637 94.0% 158.7% 306.6% 24.1% 16.7%	PSI Aktiengesellschaft	XTRA:PSAN	444	468	87.8%	17.3%	31.9%	10.8%	8.5%	9.0%	1.7x	1.6x	18.9x	13.6x	30.5x		
Square, Inc. SQ \$97,929 \$98,142 89.4% 247.9% \$27.7% 76.6% 65.5% 0.2% 12.8x 7.7x NM NM NM Fiserv, Inc. FISV 97,655 76,336 91.1% (1.5%) 73.7% 95.8% 4.6% 32.1% 6.5x 6.2x 20.2x 15.9x 84.3x Ed MSCI Inc. MSCI 39,252 37,015 99.9% 73.0% 252.9% 9.6% 10.2% 55.2% 23.7x 21.5x 42.9x 37.3x 65.1x Publ SS&C Technologies Holdings, Inc. SSNC 25,575 18,621 98.3% 18.5% 79.7% 2.8% 10.0% 37.1% 5.5x 5.4x 14.8x 13.6x 32.7x Black Knight Financial Services, Inc. BKFS 16,623 13.733 NA NA NA 2.9% 14.5% 33.9% 13.9x 12.1x 40.9x 24.2x 59.7x 1ack Jack Henry & Associates, Inc. JKHY 12,237 12,362 80.6% 11.2% 38.5% 7.1% 5.0% 26.1%	Median		\$8,973	\$8,828	91.2%	14.2%	52.5%	(2.6%)	8.5%	17.9%	5.8x	5.6x	27.2x	21.5x	34.2x	Financial	
Square, Inc. SQ \$97,929 \$98,142 89.4% 247.9% 527.7% 76.6% 65.5% 0.2% 12.8x 7.7x NM NM NM NM Fiserv, Inc. FISV 97,655 76,336 91.1% (1.5%) 73.7% 95.8% 4.6% 32.1% 6.5x 6.2x 20.2x 15.9x 84.3x Ed MSCI Inc. MSCI 39,252 37,015 99.9% 73.0% 252.9% 9.6% 10.2% 55.2% 23.7x 21.5x 42.9x 37.3x 65.1x Publ SS&C Technologies Holdings, Inc. SSNC 25,575 18,621 98.3% 18.5% 79.7% 2.8% 1.0% 37.1% 5.5x 5.4x 14.8x 13.6x 32.7x Black Knight Financial Services, Inc. BKFS 16,623 13,733 NA NA NA 2.9% 14.5% 33.9% 13.9x 12.1x 40.9x 24.2x 59.7x Jack Henry & Associates, Inc. JKHY 12,237 12,362 80.6% 11.2% 38.5% 7.1% 5.0% 26.1% 7.2x <t< td=""><td></td><td></td><td></td><td></td><td>F</td><td>INANCIAL</td><td>SOFTWAR</td><td>E</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>					F	INANCIAL	SOFTWAR	E									
MSCI 39,252 37,015 99.9% 73.0% 252.9% 9.6% 10.2% 55.2% 23.7x 21.5x 42.9x 37.3x 65.1x Publ SS&C Technologies Holdings, Inc. SSNC 25,575 18,621 98.3% 18.5% 79.7% 2.8% 1.0% 37.1% 5.5x 5.4x 14.8x 13.6x 32.7x Publ SS&C Technologies Holdings, Inc. SSNC 25,575 18,621 98.3% 18.5% 79.7% 2.8% 1.0% 37.1% 5.5x 5.4x 14.8x 13.6x 32.7x Jack Henry Black Knight Financial Services, Inc. JKHY 12,237 12,362 80.6% 11.2% 38.5% 7.1% 5.0% 26.1% 7.2x 6.8x 27.4x 21.7x 41.4x MM	Square, Inc.	SQ	\$97,929	\$98,142	89.4%	247.9%	527.7%	76.6%	65.5%	0.2%	12.8x	7.7x	NM	NM	NM	HCIT	
MSCI Inc. MSCI 39,252 37,015 99.9% 73.0% 252.9% 9.6% 10.2% 55.2% 23.7x 21.5x 42.9x 37.3x 65.1x Publicity SS&C Technologies Holdings, Inc. SSNC 25,575 18,621 98.3% 18.5% 79.7% 2.8% 1.0% 37.1% 5.5x 5.4x 14.8x 13.6x 32.7x 14.8x 13.6x 32.7x 12.1x 40.9x 24.2x 59.7x 13.4c 14.8x 13.6x 32.7x 12.1x 40.9x 24.2x 59.7x 14.6x 13.6x 32.7x 12.1x 40.9x 24.2x 59.7x 14.4x 13.6x 32.7x 12.1x 40.9x 24.2x 59.7x 14.6x 14.6x 14.6x 14.6x 14.4x	Fiserv, Inc.	FISV	97,655	76,336	91.1%	(1.5%)	73.7%	95.8%	4.6%	32.1%	6.5x	6.2x	20.2x	15.9x	84.3x	EdTech /	
Black Knight Financial Services, Inc. BKFS 16,623 13,733 NA NA NA 2.9% 14.5% 33.9% 13.9x 12.1x 40.9x 24.2x 59.7x Jack Henry & Associates, Inc. JKHY 12,237 12,362 80.6% 11.2% 38.5% 7.1% 5.0% 26.1% 7.2x 6.8x 27.4x 21.7x 41.4x Black Line, Inc. BL 7,533 7,637 94.0% 158.7% 306.6% 24.1% 16.7% NM 22.4x 19.2x NM NM NM NM Q2 Holdings, Inc. QTWO 6,906 6,818 96.9% 56.1% 243.4% 28.7% 21.8% NM 18.1x 14.9x NM Augestate S	MSCI Inc.	MSCI	39,252	37,015	99.9%	73.0%	252.9%	9.6%	10.2%	55.2%	23.7x	21.5x	42.9x	37.3x	65.1x	Public Sector	
Black Knight Financial Services, Inc. BKFS 16,623 13,733 NA NA NA NA 2.9% 14.5% 33.9% 13.9x 12.1x 40.9x 24.2x 59.7x Jack Henry & Associates, Inc. JKHY 12,237 12,362 80.6% 11.2% 38.5% 7.1% 5.0% 26.1% 7.2x 6.8x 27.4x 21.7x 41.4x BlackLine, Inc. BL 7,533 7,637 94.0% 158.7% 306.6% 24.1% 16.7% NM 22.4x 19.2x NM NM NM Sm Q2 Holdings, Inc. QTWO 6,906 6,818 96.9% 56.1% 243.4% 28.7% 21.8% NM 18.1x 14.9x NM A	SS&C Technologies Holdings, Inc.	SSNC	25,575	18,621	98.3%	18.5%	79.7%	2.8%	1.0%	37.1%	5.5x	5.4x	14.8x	13.6x	32.7x		
Jack Henry & Associates, Inc. JKHY 12,237 12,362 80.6% 11.2% 38.5% 7.1% 5.0% 26.1% 7.2x 6.8x 27.4x 21.7x 41.4x BlackLine, Inc. BL 7,533 7,637 94.0% 158.7% 306.6% 24.1% 16.7% NM 22.4x 19.2x NM A A A A A A A <td>Black Knight Financial Services, Inc.</td> <td>BKFS</td> <td>16,623</td> <td>13,733</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>2.9%</td> <td>14.5%</td> <td>33.9%</td> <td>13.9x</td> <td>12.1x</td> <td>40.9x</td> <td>24.2x</td> <td>59.7x</td> <td>Large-Cap SaaS</td>	Black Knight Financial Services, Inc.	BKFS	16,623	13,733	NA	NA	NA	2.9%	14.5%	33.9%	13.9x	12.1x	40.9x	24.2x	59.7x	Large-Cap SaaS	
BlackLine, Inc. BL 7,533 7,637 94.0% 136.7% 506.6% 24.1% 16.7% NM 19.2X NM NM NM Q2 Holdings, Inc. QTWO 6,906 6,818 96.9% 56.1% 243.4% 28.7% 21.8% NM 18.1x 14.9x NM A A A A A A	Jack Henry & Associates, Inc.	JKHY	12,237	12,362	80.6%	11.2%	38.5%	7.1%	5.0%	26.1%	7.2x	6.8x	27.4x	21.7x	41.4x		
Q2 Holdings, Inc. QTWO 6,906 6,818 96.9% 56.1% 243.4% 28.7% 21.8% NM 18.1x 14.9x NM NM NM Duck Creek Technologies NasdaqGS:DC 5,301 5,665 90.2% NA NA 30.8% 11.0% NM 23.7x 21.3x NM NM NM NM Vertex, Inc. VasdaqGM:VEF 4,823 5,092 92.5% NA NA 32.6% 7.9% NM 13.4x 12.4x NM NM NM An Envestnet. Inc. FNV 4.923 4.440 89.0% 18.2% 65.1% 12.0% 10.3% 14.5% 5.1x 4.6x 34.9x 20.0x NM	BlackLine, Inc.	BL	7,533	7,637	94.0%	158.7%	306.6%	24.1%	16.7%	NM	22.4x	19.2x	NM	NM	NM	Small-Cap SaaS	
Vertex, Inc. VasdaqGM:VEF 4,823 5,092 92.5% NA NA 32.6% 7.9% NM 13.4x 12.4x NM NM An Envestnet. Inc. Env 4.923 4.440 89.0% 18.2% 65.1% 12.0% 10.3% 14.5% 5.1x 4.6x 34.9x 20.0x NM Image: NM	Q2 Holdings, Inc.	QTWO	6,906	6,818	96.9%	56.1%	243.4%	28.7%	21.8%	NM	18.1x	14.9x	NM	NM	NM	Cppc	
Envestnet. Inc. FNV 4.923 4.440 89.0% 18.2% 65.1% 12.0% 10.3% 14.5% 5.1% 4.6% 34.9% 20.0% NM	Duck Creek Technologies	NasdaqGS:DC	5,301	5,665	90.2%	NA	NA	30.8%	11.0%	NM	23.7x	21.3x	NM	NM	NM	Data &	
Envestnet, Inc. ENV 4,923 4,440 89.0% 18.2% 65.1% 12.0% 10.3% 14.5% 5.1x 4.6x 34.9x 20.0x NM	Vertex, Inc.	NasdaqGM:VEF	4,823	5,092	92.5%	NA	NA	32.6%	7.9%	NM	13.4x	12.4x	NM	NM	NM	Analytics	
	Envestnet, Inc.	ENV	4,923	4,440	89.0%	18.2%	65.1%	12.0%	10.3%	14.5%	5.1x	4.6x	34.9x	20.0x	NM	IT Operations	
Oracle Financial Services Software Ltd. BSE:532466 3,213 3,780 94.3% 17.2% (21.4%) (1.5%) 11.5% 46.6% 4.8x 4.3x 10.2x 8.7x 17.4x	Oracle Financial Services Software Ltd.	BSE:532466	3,213	3,780	94.3%	17.2%	(21.4%)	(1.5%)	11.5%	46.6%	4.8x	4.3x	10.2x	8.7x	17.4x		
Median \$9,885 \$10,000 92.5% 18.5% 79.7% 18.0% 10.6% 33.0% 13.1x 9.9x 27.4x 20.0x 50.6x	Median		\$9,885	\$10,000	92.5%	18.5%	79.7%	18.0%	10.6%	33.0%	13.1x	9.9x	27.4x	20.0x	50.6x	Data Storage	

		Enterprise	Market	% of 52	1-Year Stock	3-Year Stock	Revenu	e Growth	LTM EBITDA		Enterpri	se Value /		Price /	
Company	Ticker	Value (\$mm)	Cap (\$mm)	Week High	Performance	Performance	LTM	NTM	Margin	LTM Rev.	NTM Rev.	LTM EBITDA	NTM EBITDA	Earnings	
					HEALTH	ICARE IT									Software Bellwethers
Veeva Systems Inc	VEEV	\$39,705	\$41,237	86.7%	93.6%	392.5%	34.6%	19.3%	26.9%	28.8x	24.1x	NM	NM	120.1x	
Cerner Corporation	CERN	24,671	24,061	97.0%	6.9%	16.5%	(1.1%)	1.7%	22.5%	4.4x	4.4x	19.8x	13.5x	30.3x	Communication
Inovalon Holdings, Inc.	INOV	3,744	2,824	65.1%	(3.5%)	21.1%	7.6%	12%	27.4%	5.7x	5.2x	21.0x	14.5x	NM	<u> </u>
Phreesia, Inc.	PHR	2,175	2,396	90.9%	103.7%	NA	17.9%	21.8%	NM	15.6x	12.8x	NM	NM	NM	Enterprise
Allscripts Healthcare Solutions, Inc.	MDRX	3,258	2,281	96.9%	47.1%	(0.8%)	(4.9%)	(5.5%)	4.2%	1.9x	2.1x	46.7x	12.1x	NM	Enterprise
Health Catalyst, Inc.	HCAT	1,768	1,850	95.5%	25.4%	NA	21.4%	21.2%	NM	9.9x	8.1x	NM	NM	NM	
Evolent Health Inc.	EVH	1,359	1,351	95.5%	77.1%	30.3%	22.9%	(3.5%)	NM	1.4x	1.4x	NM	34.9x	NM	НСМ
Median		\$3,258	\$2,396	95.5%	47.1%	21.1%	17.9%	11.5%	24.7%	5.7x	5.2x	21.0x	14.0x	75.2x	
															Marketing
				EDTECH	/ PUBLIC S	SECTOR SC	PLIMA	RE							
Constellation Software Inc.	TSX:CSU	\$27,564	\$27,490	92.4%	31.1%	116.9%	13.9%	14.8%	16.6%	7.2x	6.3x	43.2x	21.5x	72.3x	PLM & Engineering
Tyler Technologies, Inc.	TYL	17,048	17,604	93.6%	45.5%	146.6%	7.9%	5.0%	19.6%	15.2x	14.5x	NM	48.9x	93.9x	
2U, Inc.	TWOU	2,755	2,883	80.9%	66.8%	(38.0%)	37.2%	21.1%	NM	3.8x	3.1x	NM	NM	NM	SCM & Logistics
Blackbaud, Inc.	BLKB	3,303	2,779	68.8%	(27.7%)	(39.1%)	2.8%	(2.4%)	12.5%	3.6x	3.7x	29.0x	14.9x	122.6x	
NIC Inc.	EGOV	1,508	1,731	96.4%	15.6%	55.6%	17.5%	9.8%	20.0%	3.7x	3.4x	18.6x	13.4x	28.5x	Energy
Stride, Inc.	LRN	971	847	40.2%	4.3%	33.5%	24.3%	15.4%	8.3%	0.8x	0.7x	9.2x	4.7x	16.7x	Lifergy
Median		\$3,029	\$2,831	86.6%	23.3%	44.6%	15.7%	12.3%	16.6%	3.8x	3.6x	23.8x	14.9x	72.3x	
															Financial
															HCIT
															EdTech /
															Public Sector
															Large-Cap

SaaS Small-Cap SaaS Data & Analytics IT Operations

Data Storage

Smartenkow, Mr. NOM 106,613 107,841 97,1% 92,1% 92,2% 92,6% 12,4% 92,3% 92,2% 92,3%			Enterprise	Market	% of 52	1-Year Stock	3-Year Stock	Revenue	e Growth	LTMEBITDA		Enterpri	se Value /		Price /	
Instruction CMM S202,445 S202,741 78.2% 10.0% 10.8% 10.0% 9.3% 8.3x NM 23.2 NM MM MM MM Signal Action	Company	Ticker	Value (\$mm)	Cap (\$mm)	Week High	Performance	Performance	LTM	NTM	Margin	LTM Rev.	NTM Rev.	LTM EBITDA	NTM EBITDA	Earnings	
sales/corde. CMM S200,214 72.32 84.68 11.7.7 200 18.68 10.0% 9.9.8 8.3.8 NM 29.3.8 7.3.8 Constrained and antication function. 7.3.8 <td colspan="13">LARGE-CAP SAAS (Market Cap > \$3Bn)</td> <td></td>	LARGE-CAP SAAS (Market Cap > \$3Bn)															
Zoom Vaccounside Communications, inc. ZM 96,474 97,378 97,378 97,378 97,378 12,378 12,378 12,378 12,378 12,378 12,378 12,378 12,378 12,378 12,378 12,378 12,378 13,38 NM NM MM <	salesforce.com, inc.	CRM	\$200,445	\$203,714	78.2%	36.8%	117.7%	28.0%	18.8%	10.0%	9.9x	8.3x	NM	29.3x	57.3x	Bellwethers
Zoom Vaccommunications, inc. Zoo 96,474 96,474 96,474 97,378 37,387 M.A 22.976 42.87 22.076 M.M Zoo M.M M	ServiceNow, Inc.	NOW	106,613	107,361	97.1%	95.0%	322.1%	30.9%	25.0%	12.4%	25.3x	20.2x	NM	NM	153.2x	Communication
Workday, Inc. WDAY 56,985 57,703 92,5% 45,7% 135,3% 21,0% 52,7% 13,7% 11,3% MM 49,7% MM 49,7% MM Lenterprise CrewdSrike Holding, Inc. CRW 45,552 46,668 93,2% 32,4% NA 45,857 45,86% NM MI 41,37 NM MM NM	Zoom Video Communications, Inc.	ZM	94,674	96,476	57.3%	395.8%	NA	262.3%	72.6%	22.9%	48.4x	28.0x	NM	NM	NM	
Workday, Inc. WD 56,98 57,703 92,5% 45,7% 13,2% 11,2% 11,3% NM 49,7x NM Enclassion Consdrike infolings, Inc. 0CRU 43,539 44,672 76,66K 200,0% NA 43,5% 77,3K NM 41,35 NM NM NM NM Vec Vecwa Systems Inc. VEV 32,765 41,237 66,7K 93,6K 392,5K 34,6K 19,3K 26,9K 21,3K NM NM NM NM Vec Vecwa Systems Inc. PNC 25,666 96,0% 70,8K 683,0K 17,2K 16,9K 22,7K 31,9K 22,3K NM NM NM Vector 10,8K 13,7K 11,8K NM NM 10,8K 12,8K 13,7K 11,8K NM NM NM 10,8K 12,8K 11,7K NM NM NM 12,8K 12,7K 1,8K 13,7K 11,8K 14,1K 16,1K 12,1K	Atlassian Corp. Plc	TEAM	57,097	58,281	93.5%	94.3%	413.8%	30.9%	13.4%	3.7%	33.4x	29.4x	NM	NM	NM	Entormico
Docussign, inc. DOCU 41,559 41,472 76,6% 200,0% NA 44,38 37,1% NM 32,0% 23,4% NM NM NM I/C/I Verve Systems Inc. WE W 39,705 41,237 86,7% 93,6% 932,5% 34,6% 13,3% 26,9% 26,8% 24,1x NM NM 100.1 Marketting Payoon Software, Inc. QU P 25,660 26,064 96,0% 70,8% 46,10% 17,2% 16,9% 27,7% 31,9% 27,3% NM NM NM NM NM 15,87 PAyoon Software, Inc. QU P 24,618 94,461 91,8% 28,8% 3,5% 28,6% NM 16,9 13,7% 20,0 16,0 13,7% 20,0 16,0 13,7% 20,0 16,0 13,7% 20,0 16,0 13,7% 20,0 16,0 13,7% 20,0 22,0 NM NM NM NM NM NM NM NM NM <	Workday, Inc.	WDAY	56,985	57,703	92.5%	45.7%	135.5%	21.0%	15.2%	1.2%	13.7x	11.9x	NM	49.7x	NM	Enterprise
Dacksgrin Dacksgrin Dacksgrin Dacksgrin VEV 39,75 41,273 87,74 93,65 43,258 23,44 NM	CrowdStrike Holdings, Inc.	CRWD	45,852	46,868	93.2%	324.7%	NA	85.9%	45.8%	NM	NM	41.3x	NM	NM	NM	
Ring 34,686 33,988 91,5% 124,7% 683,0% 31,4% 23,3% NM 31,5% 25,5% NM NM NM NM NM Marketing Paycon Software, Inc. COUP 25,660 26,664 66,06 70,8% 683,06 12,2% 16,5% 23,7% NM NM NM 155,3% NM NM NM 155,3% NM NM NM 155,3% NM NM NM NM NM 155,3% NM	DocuSign, Inc.	DOCU	41,559	41,472	76.6%	200.0%	NA	44.3%	37.1%	NM	32.0x	23.4x	NM	NM	NM	HCM
ninge-transport ning so-good	Veeva Systems Inc	VEEV	39,705	41,237	86.7%	93.6%	392.5%	34.6%	19.3%	26.9%	28.8x	24.1x	NM	NM	120.1x	
COUP 24,618 24,61 91.8% 131.7% 985.6% 38.6% 27.3% NM NM 39.5% NM NM 91.8% NM NM 91.8% NM NM 91.8% NM NM 91.8% 21.7% 16.0% 13.7% 22.0% 23.6% A18.7% 23.6% 23.6% A18.7% 7.2% 7.0% 16.0% 13.7% 22.0% 23.6% 23.6% 23.6% 23.6% 7.2% 7.0% 16.0% 13.7% 22.0% 23.6% 23.6% 23.6% 23.6% 10.7% 10.7% 23.6% NM 11.6% 31.7% MM NM	RingCentral, Inc.	RNG	34,686	33,968	93.5%	124.7%	683.0%	31.4%	23.3%	NM	31.5x	25.5x	NM	NM	NM	Marketing
COUP 24,618 24,61 91.8% 131.7% 985.6% 38.6% 27.3% NM NM 39.5% NM NM <td>Paycom Software, Inc.</td> <td>PAYC</td> <td>25,960</td> <td>26,064</td> <td>96.0%</td> <td>70.8%</td> <td>463.0%</td> <td>17.2%</td> <td>16.9%</td> <td>29.7%</td> <td>31.9x</td> <td>27.3x</td> <td>NM</td> <td>NM</td> <td>158.5x</td> <td></td>	Paycom Software, Inc.	PAYC	25,960	26,064	96.0%	70.8%	463.0%	17.2%	16.9%	29.7%	31.9x	27.3x	NM	NM	158.5x	
HUBS 17,795 18,192 94,3% 150,1% 348,5% 29,2% 23,6% NM 21,8% 17,6% NM	Coupa Software, Inc.	COUP		24,461	91.8%	131.7%	985.6%	38.6%	27.3%	NM	NM	39.5x	NM	NM	NM	PLM & Engineering
Hubs 17,795 18,192 94,3% 150,1% 348,5% 29,2% 23,6% NM 21,8x 17,6x NM	Check Point Software Technologies Ltd.	СНКР		18,634	95.4%	19.8%	28.3%	3.5%	2.8%	45.1%	7.2x	7.0x	16.0x	13.7x	22.0x	
Zendesk, Inc. ZEN 16,507 16,699 99.0% 86.8% 322.9% 28.6% 23.1% NM 16.9x 13.7x NM NM NM NM Kero Linited ASX:XRO 16,574 16,576 92.9% 83.5% 412.3% 31.3% 28.4% 11.6% 31.7x 24.7x NM NM NM NM Avalara Inc AVLR 12.947 13,345 89.4% 125.1% NA 31.8% 25.9% NM 27.2x NM NM NM NM PM PM PM 15.37 16.69 92.9% 17.3% NA 31.8% 25.9% NM 27.5% 20.2x 16.5x NM NM NM PM PM 93.0% 16.59 92.8% 165.9% 601.0% 29.6% 13.8% 28.5% 23.8x 28.5x 23.8x NM	-	HUBS			94.3%	150.1%	348.5%		23.6%	NM	21.8x	17.6x	NM	NM		SCM & Logistics
Xero Limited ASX.XR0 16,524 16,576 92,9% 83,5% 412,3% 31,3% 28,4% 11,6% 31,7% 24,7% NM NM <td></td> <td></td> <td></td> <td>,</td> <td>99.0%</td> <td></td> <td></td> <td>28.6%</td> <td>23.1%</td> <td>NM</td> <td></td> <td>13.7x</td> <td>NM</td> <td></td> <td></td> <td></td>				,	99.0%			28.6%	23.1%	NM		13.7x	NM			
Avalara Inc AVIR 12,947 13,945 89.4% 125.1% NA 31.8% 25.9% NM 27.9x 22.2x NM NM NM NM Linegy Dynatrace, Inc. DT 12,466 12,206 88.6% 71.0% NA 28.0% 19.4% 17.5% 20.2x 16.9x NM NM NM 154.9x Filegy, Inc. 10.942 13.4x 13.6x 13.4x 13.4x 13.4x NM	,	ASX:XRO		,						11.6%			NM			
Dynatrace, Inc. DT 12,486 12,206 88.6% 71.0% NA 28.0% 19.4% 17.5% 20.2x 16.9x NM NM 154.9x Financial Five, Inc. FiVN 11,383 11,507 92.8% 165.9% 601.0% 29.6% 19.8% 2.8% 28.5x 23.8x NM													NM			Energy
Five, Inc. FivN 11,383 11,507 92.8% 165.9% 601.0% 29.6% 19.8% 2.8% 28.5x 23.8x NM NM NM Financial Guidewire Software, Inc. GWRE 10,091 10,782 99.2% 17.3% 73.4% 8.4% (1.9%) 1.3% 13.4x 13.6x NM NM NM And Anaplan, Inc. PLAN 9.953 10,195 94.1% 37.1% NA 32.7% 22.6% NM 23.5x 19.2x NM <				,						17.5%			NM		154.9x	
Guidewire Software, Inc. GWRE 10,091 10,782 99.2% 17.3% 73.4% 8.4% (1.9%) 1.3% 13.4x 13.6x NM NM NM NM Anaplan, Inc. PLAN 9.953 10,195 94.1% 37.1% NA 32.7% 22.6% NM 23.5x 19.2x NM	•												NM			Financial
Anaplan, Inc. PLAN 9,953 10,195 94.1% 37.1% NA 32.7% 22.6% NM 23.5x 19.2x NM NM NM NM MM NM MM NM <	,	GWRE		,	99.2%		73.4%	8.4%	(1.9%)	1.3%	13.4x	13.6x	NM	NM	NM	
Smartsheet, Inc. SMAR 8,120 8,471 91.8% 54.3% NA 44.8% 29.0% NM 22.9x 17.8x NM NM NM NM Proofpoint, Inc. PFPT 7,696 7,872 99.0% 18.8% 53.6% 20.8% 12.0% NM 7.6x 6.8x NM 42.8x NM Q2 holdings, Inc. QTWO 6.906 6,818 96.9% 56.1% 243.4% 28.7% 21.8% NM 18.1x 14.9x NM	,			,					. ,				NM			HCIT
Proofpoint, Inc. PFPT 7,696 7,872 99.0% 18.8% 53.6% 20.8% 12.0% NM 7.6x 6.8x NM 42.8x NM Q2 Holdings, Inc. QTWO 6,906 6,818 96.9% 56.1% 243.4% 28.7% 21.8% NM 18.1x 14.9x NM S3.8% S3.8% S3.6% S3.8% S3.6% S3.6% <td< td=""><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>NM</td><td></td><td></td><td>NM</td><td></td><td></td><td>\subseteq</td></td<>	•									NM			NM			\subseteq
Q2 Holdings, Inc. QTWO 6,906 6,818 96.9% 56.1% 243.4% 28.7% 21.8% NM 18.1x 14.9x NM Approximate its in its i	,			,						NM			NM			
Cyber Ark Software Ltd. CYBR 5,635 6,259 96.6% 38.6% 200.4% 8.8% 6.4% 5.4% 12.5x 11.8x NM NM NM NM Appeloi AppFolio Inc APPF 6,039 6,180 96.5% 63.7% 333.8% 27.6% 10.0% 7.0% 19.8x 18.0x NM NM 37.8x Alarm.com Holdings, Inc. ALRM 5,003 5,081 98.8% 140.7% 174.0% 25.3% 4.6% 16.0% 8.4x 8.1x NM 44.4x 67.8x Small-Cap Saas Medallia, Inc. MDLA 4,807 4,998 82.6% 6.8% NA 21.3% 15.3% NM 10.5x 9.1x NM MM MM Saas Small-Cap Saas Qualys, Inc. QLYS 4,363 4,755 96.5% 46.2% 105.3% 13.4% 12.2x 10.4x NM NM MM Analytics Workiva, Inc. WK 4,218 4,416 97.7% 117.9% 328.1% 19.8% 14.5% NM <td>• •</td> <td></td> <td>Public Sector</td>	• •															Public Sector
AppFolio Inc APPF 6,039 6,180 96.5% 63.7% 333.8% 27.6% 10.0% 7.0% 19.8x 18.0x NM NM 37.8x Saas Alarm.com Holdings, Inc. ALRM 5,003 5,081 98.8% 140.7% 174.0% 25.3% 4.6% 16.0% 8.4x 8.1x NM 44.4x 67.8x Small-Cap Saas Medallia, Inc. MDLA 4,807 4,998 82.6% 68.8% NA 21.3% 15.3% NM 10.5x 9.1x NM Alars NM NM NM NM NM NM NM </td <td></td> <td></td> <td>,</td> <td>,</td> <td></td> <td>Large-Cap</td>			,	,												Large-Cap
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	Median		\$11,935	\$11,857	93.8%	74.7%	328.1%	28.4%	19.3%	12.3%	17.5x	15.9x	25.9x	36.4x	80.4x	IT Security

		Enterprise	Market	% of 52	1-Year Stock	3-Year Stock	Revenu	e Growth	LTM EBITDA		Enterpris	se Value /		Price/	
Company	Ticker	Value (\$mm)	Cap (\$mm)	Week High	Performance	Performance	LTM	NTM	Margin	LTM Rev.	NTM Rev.	LTM EBITDA	NTM EBITDA	Earnings	
SMALL-CAP SAAS (Market Cap < \$3Bn)															Software Bellwethers
Box, Inc.	BOX	\$3,013	\$2,864	81.7%	7.6%	(14.5%)	11.7%	8.1%	0.5%	4.0x	3.7x	NM	14.4x	NM	Beliwethers
Cornerstone Ondemand, Inc.	CSOD	3,995	2,845	68.3%	(24.8%)	24.7%	21.0%	20.1%	12.7%	5.8x	4.9x	46.1x	14.6x	NM	Communication
Yext, Inc.	YEXT	1,843	1,922	75.2%	9.0%	30.7%	22.3%	12.2%	NM	5.4x	4.8x	NM	NM	NM	<u> </u>
Domo, Inc.	DOMO	1,931	1,910	88.5%	193.6%	NA	19.7%	15.4%	NM	9.7x	8.4x	NM	NM	NM	Enterprise
Eventbrite, Inc.	EB	1,337	1,659	79.0%	(10.3%)	NA	(49.4%)	4.3%	NM	8.3x	7.9x	NM	NM	NM	
Upland Software, Inc.	UPLD	1,688	1,352	89.1%	28.5%	111.9%	38.6%	2.5%	17.3%	6.0x	5.9x	35.0x	18.4x	NM	нсм
Model N, Inc.	MODN	1,160	1,242	80.1%	1.7%	126.5%	14.0%	6.4%	NM	7.2x	6.8x	NM	NM	NM	ПСІVІ
Talend SA	TLND	1,235	1,218	81.9%	(2.0%)	2.3%	16.2%	13.0%	NM	4.5x	4.0x	NM	NM	NM	
Ebix, Inc.	EBIX	1,841	1,176	97.3%	13.6%	(52.1%)	(3.7%)	21.2%	26.1%	3.3x	2.8x	12.9x	NM	12.4x	Marketing
Benefitfocus, Inc.	BNFT	639	466	64.9%	(34.0%)	(46.4%)	(1.5%)	(0.3%)	1.8%	2.3x	2.3x	NM	15.5x	NM	
Castlight Health, Inc.	CSLT	170	200	79.8%	(2.3%)	(65.3%)	(1.9%)	(12.2%)	NM	1.2x	1.3x	NM	NM	NM	PLM & Engineering
Median		\$1,688	\$1,352	80.1%	1.7%	2.3%	14.0%	8.1%	12.7%	5.4x	4.8x	35.0x	15.1x	12.4x	

SCM & Logistics

Energy

Financial

HCIT EdTech / Public Sector Large-Cap SaaS Small-Cap SaaS Data & Analytics IT Operations

Data Storage

		Enterprise	Market	% of 52	1- Year Stock	3-Year Stock	Revenue	e Growth	LTMEBITDA		Enterpri	se Value /		Price /	
Company	Ticker	Value (\$mm)	Cap (\$mm)	Week High	Performance	Performance	LTM	NTM	Margin	LTM Rev.	NTM Rev.	LTM EBITDA	NTM EBITDA	Earnings	
					DATA & A	NALYTICS									Software
Snowflake Inc.	NYSE:SNOW	\$75,116	\$79,664	65.6%	NA	NA	406.2%	92.2%	NM	NM	NM	NM	NM	NM	Bellwethers
Palantir Technologies Inc.	NYSE:PLTR	39,423	41,025	70.3%	NA	NA	67.9%	31.6%	NM	39.4x	30.0x	NM	NM	NM	Communication
Verisk Analytics Inc	VRSK	36,965	33,752	98.5%	39.0%	116.2%	8.0%	6.4%	44.6%	13.5x	12.6x	30.1x	25.6x	50.5x	
Datadog, Inc.	DDOG	29,116	29,978	83.3%	160.6%	NA	73.6%	38.2%	1.3%	NM	39.0x	NM	NM	NM	Enterprise
Splunk Inc.	SPLK	28,160	27,475	75.2%	13.4%	105.1%	3.9%	7.6%	NM	12.4x	11.5x	NM	NM	NM	Linterprise
Pegasystems Inc.	PEGA	10,868	10,754	94.6%	67.3%	182.6%	11.7%	17.2%	NM	10.9x	9.3x	NM	NM	NM	
Dun & Bradstreet Holdings, Inc.	NYSE:DNB	13,654	10,529	84.3%	NA	NA	18.0%	6.2%	24.3%	8.1x	7.6x	33.3x	18.1x	NM	НСМ
Verint Systems Inc.	VRNT	4,889	4,416	99.4%	21.4%	60.5%	(2.4%)	4.9%	14.8%	3.9x	3.7x	26.1x	14.2x	NM	
MicroStrategy Incorporated	MSTR	3,654	3,601	97.1%	172.4%	195.9%	(0.4%)	NM	12.5%	7.6x	NM	NM	NM	NM	Marketing
Inovalon Holdings, Inc.	INOV	3,744	2,824	65.1%	(3.5%)	21.1%	7.6%	11.5%	27.4%	5.7x	5.2x	21.0x	14.5x	NM	
Teradata Corporation	TDC	2,606	2,456	80.9%	(16.1%)	(41.6%)	(7.7%)	0.6%	8.0%	1.4x	1.4x	17.7x	6.3x	23.4x	PLM & Engineering
PROS Holdings, Inc.	PRO	2,138	2,205	73.8%	(15.3%)	91.9%	8.9%	(3.8%)	NM	8.3x	8.6x	NM	NM	NM	
Talend SA	TLND	1,235	1,218	81.9%	(2.0%)	2.3%	16.2%	13.0%	NM	4.5x	4.0x	NM	NM	NM	SCM & Logistics
Median		\$10,868	\$10,529	81.9%	17.4%	91.9%	8.9%	9.6%	14.8%	8.1x	8.6x	26.1x	14.5x	36.9x	
				IT OP	ERATIONS	MANAGE	MENT								Energy
ServiceNow, Inc.	NOW	\$106,613	\$107,361	97.1%	95.0%	322.1%	30.9%	25.0%	12.4%	25.3x	20.2x	NM	NM	153.2x	
VMware, Inc.	VMW	61,033	58,878	86.0%	(7.6%)	11.9%	5.3%	7.4%	20.4%	5.3x	4.9x	25.9x	13.8x	37.1x	Financial
Arista Networks, Inc.	ANET	19,214	21,985	98.9%	42.9%	23.3%	(9.5%)	14.4%	33.0%	8.6x	7.6x	26.2x	19.6x	30.9x	
Citrix Systems, Inc.	CTXS	17,021	16,018	75.0%	17.3%	47.8%	7.5%	(0.4%)	25.7%	5.3x	5.3x	20.5x	15.0x	31.8x	HCIT
Dynatrace, Inc.	DT	12,486	12,206	88.6%	71.0%	NA	28.0%	19.4%	17.5%	20.2x	16.9x	NM	NM	154.9x	
F5 Networks, Inc.	FFIV	10,402	10,838	98.8%	26.0%	34.1%	4.8%	6.2%	21.7%	4.4x	4.2x	20.3x	11.8x	35.3x	EdTech /
Fastly, Inc.	FSLY	9,546	9,916	64.0%	335.3%	NA	46.5%	32.5%	NM	35.7x	27.0x	NM	NM	NM	Public Sector
SolarWinds Corp.	SWI	6,301	4,695	61.4%	(19.4%)	NA	10.5%	8.0%	22.9%	6.3x	5.8x	27.5x	12.5x	120.4x	Large-Cap
Datto Holding Corp.	NYSE:MSP	4,819	4,336	80.7%	NA	NA	30.6%	9.7%	22.9%	9.5x	8.7x	41.5x	32.3x	NM	SaaS
New Relic, Inc.	NEWR	3,760	4,094	88.1%	(0.5%)	13.2%	18.1%	8.3%	NM	5.9x	5.4x	NM	NM	NM	Small-Cap
PagerDuty, Inc.	PD	3,107	3,417	86.4%	78.3%	NA	29.8%	23.5%	NM	15.5x	12.6x	NM	NM	NM	SaaS
Software AG	XTRA:SOW	2,734	3,017	74.9%	7.2%	(28.9%)	1.9%	(0.3%)	21.2%	2.7x	2.7x	12.9x	12.0x	24.8x	Data &
Progress Software Corporation	PRGS	2,129	2,038	86.1%	8.8%	6.2%	7.0%	15.9%	34.4%	4.8x	4.2x	14.0x	NM	25.6x	Analytics
NetScout Systems, Inc.	NTCT	2,118	2,017	92.6%	13.9%	(10.0%)	(0.6%)	(4.7%)	17.2%	2.4x	2.5x	14.0x	NM	87.9x	
Micro Focus International plc	LSE:MCRO	6,716	1,939	36.9%	(60.1%)	(86.1%)	1.4%	(7.5%)	31.8%	2.1x	2.3x	6.7x	6.0x	NM	IT Operations
Radware Ltd.	RDWR	943	1,281	99.5%	7.6%	43.0%	(0.1%)	5.9%	7.9%	3.8x	3.6x	48.0x	21.8x	90.4x	
Median		\$6,509	\$4,516	86.2%	13.9%	13.2%	7.2%	8.1%	21.7%	5.6x	5.3x	20.5x	13.8x	37.1x	Data Storage

		Enterprise	Market	% of 52	1-Year Stock	3-Year Stock	Revenu	e Growth	LTM EBITDA		Enterpris	se Value /		Price /	
Company	Ticker	Value (\$mm)	Cap (\$mm)	Week High	Performance	Performance	LTM	NTM	Margin	LTM Rev.	NTM Rev.	LTM EBITDA	NTM EBITDA	Earnings	
DATA STORAGE														Software Bellwethers	
Snowflake Inc.	NYSE:SNOW	\$75,116	\$79,664	65.6%	NA	NA	406.2%	92.2%	NM	NM	NM	NM	NM	NM	
NetApp, Inc.	NTAP	13,911	14,797	97.9%	6.4%	19.7%	(4.1%)	2.9%	19.5%	2.5x	2.4x	12.9x	10.4x	21.5x	Communication
Dropbox	DBX	9,074	9,178	88.2%	23.9%	NA	16.6%	11.1%	12.1%	4.9x	4.4x	40.4x	14.2x	110.7x	
Iron Mountain, Inc.	IRM	19,496	8,495	85.5%	(7.5%)	(21.9%)	(1.8%)	1.6%	34.4%	4.7x	4.6x	13.6x	12.7x	63.9x	Enterprise
Nutanix, Inc.	NTNX	6,254	6,423	84.2%	2.0%	(9.7%)	5.5%	0.2%	NM	4.8x	4.8x	NM	NM	NM	
Pure Storage, Inc.	PSTG	5,871	6,168	91.8%	32.1%	42.6%	6.3%	9.1%	NM	3.5x	3.2x	NM	46.1x	NM	
Box, Inc.	BOX	3,013	2,864	81.7%	7.6%	(14.5%)	11.7%	8.1%	0.5%	4.0x	3.7x	NM	14.4x	NM	НСМ
CommVault Systems, Inc.	CVLT	2,236	2,610	95.1%	24.0%	5.5%	(1.5%)	2.6%	4.1%	3.3x	3.2x	NM	16.8x	NM	
Median		\$7,664	\$7,459	86.8%	7.6%	(2.1%)	5.9%	5.5%	12.1%	4.0x	3.7x	13.6x	14.3x	63.9x	Marketing
					IT SEC	URITY									PLM & Engineering
Cisco Systems, Inc.	CSCO	\$174,669	\$189,092	89.0%	(6.7%)	16.8%	(7.5%)	3.0%	31.7%	3.6x	3.5x	11.5x	9.8x	18.1x	
CrowdStrike Holdings, Inc.	CRWD	45,852	46,868	93.2%	324.7%	NA	85.9%	45.8%	NM	60.2x	41.3x	NM	NM	NM	SCM & Logistics
Palo Alto Networks, Inc.	PANW	34,636	34,411	94.8%	53.7%	145.2%	18.8%	19.7%	0.8%	9.7x	8.1x	NM	35.5x	NM	
VeriSign, Inc.	VRSN	25,337	24,693	97.8%	12.3%	89.1%	2.2%	3.8%	68.9%	20.2x	19.4x	29.3x	27.4x	30.6x	Enormy
Fortinet, Inc.	FTNT	22,503	24,111	96.9%	39.1%	240.0%	19.8%	16.4%	20.6%	9.2x	7.9x	44.4x	26.8x	53.0x	Energy
Cloudflare, Inc.	NET	22,718	23,352	85.6%	345.4%	NA	50.5%	35.6%	NM	58.4x	43.1x	NM	NM	NM	
Check Point Software Ltd.	СНКР	14,738	18,634	95.4%	19.8%	28.3%	3.5%	2.8%	45.1%	7.2x	7.0x	16.0x	13.7x	22.0x	Financial
Trend Micro Incorporated	TSE:4704	6,149	7,979	86.1%	6.1%	(7.0%)	7.5%	6.3%	33.8%	3.8x	3.6x	11.2x	11.2x	34.2x	
Proofpoint, Inc.	PFPT	7,696	7,872	99.0%	18.8%	53.6%	20.8%	12.0%	NM	7.6x	6.8x	NM	42.8x	NM	HCIT
CyberArk Software Ltd.	CYBR	5,635	6,259	96.6%	38.6%	290.4%	8.8%	6.4%	5.4%	12.5x	11.8x	NM	67.5x	NM	
FireEye, Inc.	FEYE	5,298	5,211	90.3%	39.5%	62.4%	6.5%	3.7%	NM	5.7x	5.5x	NM	36.1x	NM	EdTech / Public Sector
Varonis Systems, Inc.	VRNS	5,139	5,191	90.9%	110.5%	237.0%	0.3%	17.1%	NM	19.0x	16.2x	NM	NM	NM	
SailPoint Technologies	SAIL	4,717	4,840	89.3%	125.6%	267.2%	25.3%	8.8%	8.9%	13.4x	12.4x	150.7x	NM	NM	Large-Cap
Qualys, Inc.	QLYS	4,363	4,755	96.5%	46.2%	105.3%	13.4%	12.2%	34.6%	12.4x	11.0x	35.7x	24.1x	53.8x	SaaS
Rapid7 Inc.	RPD	4,814	4,674	95.3%	60.9%	383.2%	28.3%	18.5%	NM	12.3x	10.4x	NM	NM	NM	Small-Cap
Mimecast Limited	MIME	3,662	3,632	95.6%	31.0%	98.3%	20.9%	14.1%	12.2%	7.9x	6.9x	64.8x	34.2x	NM	SaaS
McAfee Corp.	MCFE	7,178	2,626	84.4%	NA	NA	12.7%	5.0%	31.7%	2.6x	2.4x	8.1x	6.8x	NM	Data &
Ping Identity Holding Corp.	PING	2,320	2,323	75.8%	17.9%	NA	6.2%	10.8%	1.0%	9.3x	8.4x	NM	64.7x	NM	Analytics
SecureWorks Corp.	SCWX	1,012	1,169	78.0%	(14.6%)	60.3%	4.0%	0.6%	1.9%	1.8x	1.8x	94.1x	47.4x	NM	
Tufin Software Technologies Ltd	TUFN	369	447	67.9%	(29.1%)	NA	(2.3%)	3.9%	NM	3.7x	3.6x	NM	NM	NM	IT Operations
Cheetah Mobile, Inc.	CMCM	33	252	42.5%	(50.4%)	(85.1%)	(54.1%)	72.9%	NM	0.1x	0.1x	NM	NM	NM	
Symantec Corporation	SYMC	87	62	84.3%	43.3%	(54.3%)	(3.0%)	NM	43.8%	2.1x	NM	4.7x	NM	20.6x	Data Storage
Median		\$5,467	\$5,201	90.6%	38.6%	89.1%	8.1%	10.8%	26.1%	8.5x	7.9x	29.3x	30.8x	30.6x	
															IT Security

Harris Williams Capabilities and Locations

Harris Williams has a broad range of industry expertise, which creates powerful opportunities. Our clients benefit from our deep-sector experience, integrated industry intelligence, and collaboration across the firm, and our commitment to learning what makes them unique. For more information, visit our website at www.harriswilliams.com/industries.



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Sources & Disclosures

Sources

- 1. S&P Capital IQ.
- 2. PNC Capital Markets.
- 3. S&P LCD stats.
- 4. PitchBook.
- 5. HW proprietary transaction information.

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