

Cybersecurity Quarterly Update

TECHNOLOGY



HOULIHAN LOKEY

Houlihan Lokey is a leading global investment bank with expertise in mergers and acquisitions, capital markets, financial restructuring, and financial and valuation advisory.

Key Facts and Figures







2,200

TOTAL FINANCIAL PROFESSIONALS

300+

MANAGING DIRECTORS(1)

2,000+

CLIENTS SERVED ANNUALLY

~\$5.5B

MARKET CAPITALIZATION⁽²⁾ \$2.3B

REVENUES

Our Services



Corporate Finance



Financial Restructuring



Financial and Valuation Advisory

Our Coverage Areas



Technology



Business Services



Consumer, Food, and Retail



Energy



Financial Services



Healthcare



Industrials



Real Estate, Lodging, and Leisure



Financial Sponsors Coverage



Equity Capital Markets



Debt Advisory

HOULIHAN LOKEY

Houlihan Lokey is the trusted advisor to more top decision-makers than any other independent global investment bank.



- No. 1 Global M&A Advisor
- Leading Capital Markets
 Advisor Raising More Than
 \$100 Billion in Past Five Years





Financial Restructuring

- No. 1 Global Restructuring Advisor
- \$3.0 Trillion of Aggregate Transaction Value Completed





Financial and Valuation Advisory

- No. 1 Global M&A Fairness Opinion Advisor
- 1,000+ Annual Valuation Engagements





- No. 1 Global Advisor to Private Equity Firms
- 1,000+ Sponsors Covered Globally

Inves	Most Active Global tment Banks to te Equity Firms	
Rank	Advisor	Deals
1	Houlihan Lokey	323
2	Deloitte	218
3	William Blair	183
Source	: PitchBook.	

Our Tech M&A Team Is No. 1 Globally With Unparalleled Reach



How Houlihan Lokey Can Help

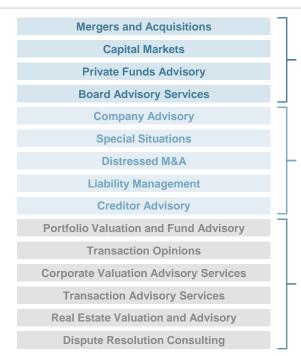
Our firm is extremely well equipped to help our clients navigate uncertain times. We respond quickly to challenging situations and are constantly helping clients analyze, structure, negotiate, and execute the best possible solutions from both a strategic and a financial perspective.

What We Offer









We are widely recognized as a leading M&A advisor to the mid-cap and have long-standing relationships with capital providers, including commercial banks and other senior credit providers, insurance funds, asset managers, and mezzanine fund investors. Few other investment banks maintain the breadth of relationships and capital markets intelligence that we do.

We have the largest restructuring practice of any global investment bank. Since 1988, we have advised on more than 1,500 restructuring transactions (with aggregate debt claims in excess of \$3.0 trillion). We served as an advisor in 12 of the 15 largest bankruptcies from 2000 to 2021.

Over nearly four decades, we have established ourselves as one of the largest financial and valuation advisory firms. Our transaction expertise and leadership in the field of valuation help inspire confidence in the financial executives, boards of directors, special committees, investors, and business owners we serve.

Why We're Different



No. 1 for U.S. and Tech M&A



Significant Experience With Financing Markets



Senior-Level Commitment and Dedication



Deep, Industry-Specific Expertise



Superior Work Product/Technical Abilities



Creativity, Imagination, Tenacity, and Positivity

Houlihan Lokey Global Tech Group Positioning

LARGE-CAP TRANSACTION EXPERTISE

- CEO-level relationships with leading tech companies
- Large senior team with unparalleled transaction experience
- Broad network including Fortune 500 relationships
- Highest quality client service
- M&A advisory and capital-raising expertise



MIDDLE MARKET/ GROWTH SECTOR FOCUS

- Unique global access to venture capital, private equity, and strategic investors
- Growth company focus
- Deep sector expertise and domain knowledge
- Extensive capital markets access
- Late-stage private through public company orientation

Global Team Focused on All Aspects of Cybersecurity

100+ Years and \$350+ Billion of Combined Technology Industry Knowledge and Transaction Experience















Bobby Wolfe Director Miami

Cooper Byrne Vice President New York



Mark Smith

Director

Manchester

Malte Abrams Managing Director Frankfurt

Raiko Stelten Managing Director Frankfurt

Walid Khiari Managing Director San Francisco

Josh Wepman Managing Director New York

Rob Louv Co-Head of U.S. Technology San Francisco

U.S. Leadership

European Leadership

Expanded Team

Core Domain Leadership

Additional Domain Experience

Broad Cybersecurity Sector Coverage

Cloud Security	Cyber Consulting, Services, and Training
Endpoint Security	Encryption Security
Governance, Risk, and Compliance	Identity and Privileged Access Management
Incident Response	IoT Security
Managed Detection Response	Managed Security Service Providers
Messaging Security	Mobile Security
Penetration Testing	Threat Intelligence

Data Protection, Integrity, and Security Fraud and Risk Protection

Identity Security and Management

Log Management

Managed SOC

Network Operations and Security

Web Security

With Highly Relevant Experience

































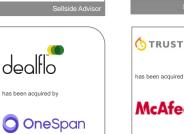


















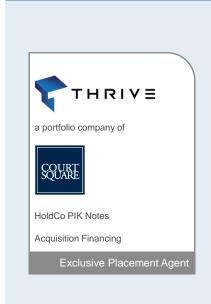








Recent Case Study: Thrive Operations



Client Profile

Thrive Operations, LLC, is a leading provider of outsourced cybersecurity and managed IT services to middle-market clients. The company offers a comprehensive suite of next-generation solutions with a strong focus on cybersecurity, managed cloud, managed infrastructure, help desk, network services, and disaster recovery. The company has a strong presence in the financial services, insurance, healthcare life sciences, and education end markets.

Thrive has executed on a focused M&A strategy predicated upon adding complementary capabilities and expanding geographic scale to grow its customer base. The company had successfully acquired and integrated seven businesses in 14 months and had two additional targets under LOI. Given that the prior acquisitions were funded through a combination of incremental senior debt and cash equity, the sponsor was interested in pursuing alternative debt financing solutions to help fund the near-term M&A targets.

Our Role

Houlihan Lokey's Capital Markets Group served as exclusive placement agent for the financing, assisting the company in marketing, arranging, structuring, and negotiating the financing to support the acquisition.

Transaction Snapshot

This financing highlights Houlihan Lokey's ability to deliver favorable outcomes for clients to support acquisition financing transactions. Houlihan Lokey fulfilled the client's key objectives, including (i) placing a fixed-rate, all-PIK piece of paper despite rising interest rates and unfavorable market conditions, (ii) maximizing the quantum of capital raised to support the company's aggressive acquisition strategy and reduce the required sponsor equity contribution, and (iii) running a limited and efficient diligence process to minimize management's involvement while they executed on the M&A strategy.

Recent Case Study: Rohde & Schwarz Cybersecurity



Client Profile

Founded in 1933 and based in Munich, Germany, Rohde & Schwarz is a leading provider of testing and measurement solutions for various industries; communications, reconnaissance, and security systems for armed forces, security bodies, and operators of infrastructure; and network and cybersecurity solutions. The group generated revenues of €2.3 billion in 2021.

Established in 2001, with headquarters in Meudon, France, and a research facility in Montpellier, Rohde & Schwarz Cybersecurity SAS provides web application and API protection (WAAP) solutions to more than 600 enterprise-level and public customers in 35 countries. Its R&S®Web Application Firewall (a leader in France with approximately 25% market share) and further WAAP solutions secure applications and APIs against application-layer attacks. The company's portfolio of solutions can be deployed on premises, in the cloud, or both, and is also offered as a managed service.

Our Role

Houlihan Lokey served as the exclusive financial advisor to Rohde & Schwarz and assisted in initiating, structuring, and negotiating all aspects of the carve-out of Rohde & Schwarz Cybersecurity SAS. This deal highlights Houlihan Lokey's deep expertise in the cybersecurity software space.

Transaction Snapshot

The transaction was signed on February 17, 2022, and closed on April 1, 2022.

TSS is a Netherlands-based vertical market software group with more than 110 independently managed software business units and 3,900 employees in Europe. TSS is part of the ecosystem of Constellation Software Inc. (CSI), a Toronto, Canada-headquartered global provider of vertical market software solutions.

Houlihan Lokey Global Tech Conference 2022



Technology Connecting the WorldHoulihan Lokey Global Tech Conference 2022

October 12-13, 2022 New York, New York

Conference Overview

Houlihan Lokey is pleased to host its inaugural Global Tech Conference on October 12-13, 2022, at the Lotte New York Palace. The event will feature company presentations, panels, and targeted one-on-one meetings.

The conference is an excellent stage to showcase your company to an audience of prospective strategic, financial, and institutional investors as well as other capital providers. Participants and attendees will gain insights into the market dynamics and strategics employed within a variety of technology sectors and participate in insightful discussion on the state of the market, growth opportunities, and current challenges.

Conference Format

- Evening VIP reception before the conference
- Presentations from attractive, highly successful companies
- Panel discussions from tech industry leaders
- High-profile featured speakers from the tech community
- Intimate industry dinners with peers and capital providers
- Targeted one-on-one meetings

Agenda and Locations

October 11	Evening	Pre-Conference VIP Reception	Location TBD
October 12	Daytime	Conference Day 1 Company Presentations and 1x1s	Lotte New York Palace
	Evening	Exclusive Sector- Focused Dinners	Locations TBD
October 13	Daytime	Conference Day 2 Company Presentations and 1x1s	Lotte New York Palace

Technology Sectors Represented











Momentum Continues in the Cybersecurity Sector

Momentum in the security market is expected to continue, driven by the persistent threat environment.

General Market Environment (\$B)



 Despite macro conditions and the overall public market pullback, security spend is expected to continue.

Public Market Environment

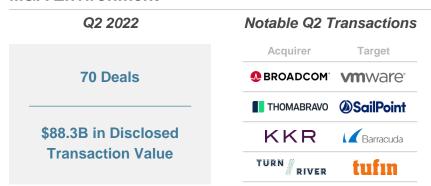
Median 2023 TEV/Revenue for High-Growth Security Companies

7.3x

3.3x Median 2023 TEV/Revenue for Low-Growth Security **Companies**

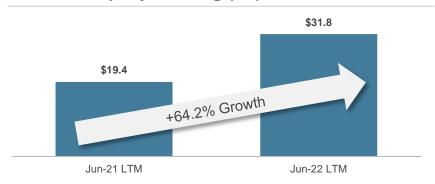
• Investors are increasingly valuing profitability vs. growth in 2022 amid a broader pullback in public multiples.

M&A Environment



 Leading players continue to pay scarcity premiums for best-of-breed solutions to fill out product suite and portfolio gaps.

Private Company Funding (\$B)



 Appetite for high-quality, later-stage, and mature cybersecurity companies remains stable as the threat environment continues to expand.

Macro Factors Impacting the Cybersecurity Market

Cyber Warfare in Ukraine



- Global awareness of Russian cyber attacks and the potential spillover effects from large-scale cyber war (e.g., the 2017 NotPetya cyber attack) are bolstering cybersecurity investment and focus.
- Following Russia's invasion of Ukraine in February 2022, the broader market has become increasingly concerned about cyber attacks.
 - As of June 30, 2022, Ukraine has experienced 796 Russian cyber attacks targeting the governmental, military, finance, energy, transport, infrastructure, and telecommunications sectors.⁽¹⁾
 - Both the Securities and Exchange
 Commission and the White House have issued statements recommending that companies use multifactor authentication, deploy endpoint detection and response tools, run incident response exercises, and encrypt data.^(2, 3)

Increasing Severity and Frequency of Successful Ransomware Attacks



- Ransomware has evolved and is a board-level issue for all organizations.
- In H1 2022, there were 162 publicly disclosed ransomware attacks.⁽⁴⁾
 - Examples of outsized outcomes include a \$400,000 payout by a Sacramento County's Office of Education and \$6 million in ransom demanded in an attack on Ward Hadaway LLP.

2022 Ransomware Attacks



 The rise of cryptocurrency, particularly Bitcoin, is correlated with an increase in ransomware attacks due to its anonymous and hard-to-trace nature.⁽⁵⁾

Bear Market



- High inflation and rising interest rates are negatively impacting fund performance and portfolio company valuations across all industries.
- Startups are facing difficulty with funding, leading to consolidation/roll-up opportunities.⁽²⁾
- However, appetite for later-stage and mature cybersecurity deals will remain stable amid adjusting valuations as the threat environment continues to be persistent and security is a priority.
 - In March 2022, Advent International and Permira completed the \$14 billion buyout of McAfee, the second largest deal in Q1 across private equity.⁽²⁾
- Public listings are less attractive exit options in volatile public markets, with sponsor-to-sponsor exits and corporate acquisitions likely to be the primary exit paths for 2022.
 - e.g., Thomas Bravo's sale of cybersecurity firm Barracuda Networks to KKR for \$4 billion.⁽²⁾

(1) Access Now Ukraine Russia Conflict

Highlighted Cybersecurity Trends

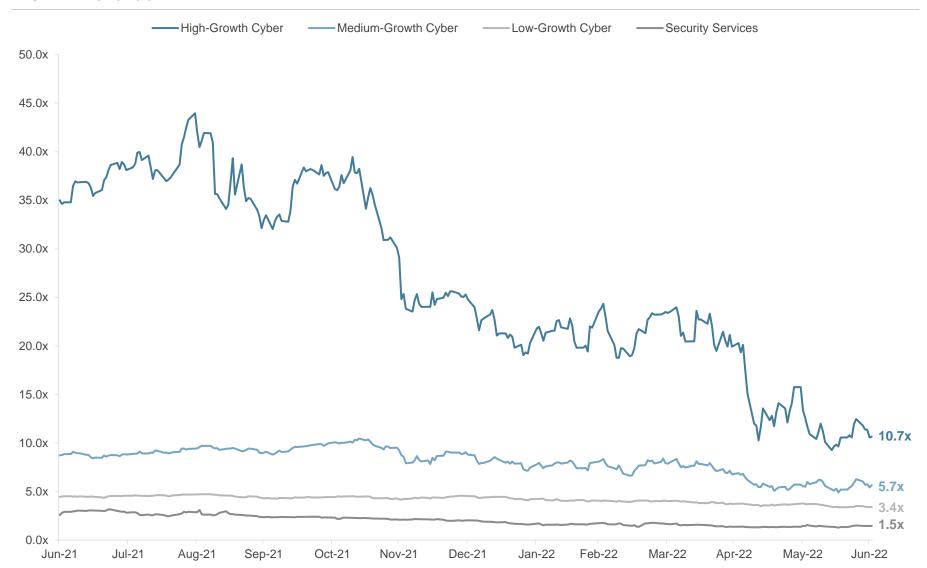
Cyber Topic	Identity 7	Threat Det	ection and	Response		Threat Int	elligence	
Trends	to protect to attacks, de and restor tampering by focusing infrastruction and resource. In today's attackers a infrastruction. The Solation gain a account forge SA. Companie	the identity in etect and inverse normal ope. This differs to g on the security or the infection of threat environare now activities. The infection of the infe	nment, more sely targeting the chused admirorganization's token signing a lateral move	om malicious ial incursions, vent of ntity solutions of the identity ividual users ophisticated ne IAM n permissions global admin g certificate to ement.	including of implication existing or existing or Changes to remote wo attack vectors in responsional range of unincreasing subsectors integrated capabilities. Innovation garner mo	se, TI is evolvin se cases and d ly fragmented r s are gradually solution set tha	nisms, indicated adviced at or hazard to the and busine increased the elincreased congress to support a lemands, result market; however converging into at offers a composition of the and the avestment and or the and the area of the ar	ors, e, about an e assets. ess, such as number of everage for growing ting in an er, the TI o an elbination of helped contributed
	20%	9%	80% of cyber today levera based attack highlighting for ITDR.	ge identity- s, ⁽¹⁾		\$1.3 +15.2% CAGR (\$2 (2021A-2025E)	
Companies to Watch	Attivo	Authomize	CROWDSTRIKE	CYBERARK	NANALYST1	Constella INTELLIGENCE	≪ CYWARE	digital shadows_
	illusive	Microsoft	netwrix	ONE IDENTITY	DigitalStake@ut	DOMAINTOOLS	flashpoint	CINTEL471
	G ORT	PING CASTLE	QOMPLX:	semperis	tookingglass	PREVAILION	• Recorded Future	SEARCHLIGHT Security
	© SILVERFORT	SPECTEROPS	() tenable	TERAMIND	SECTRIO"	**TEAM CYMRU	★ ThreatConnec	t THREATQUOTIENT

Source: Gartner

⁽¹⁾ Verizon Data Breach Investigations Report. Indicates acquired company/subsidiary.

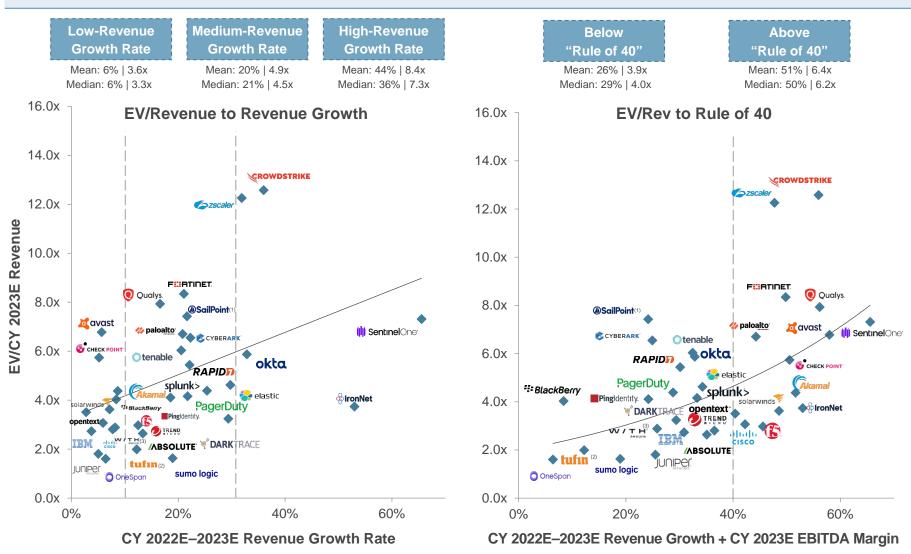
Select Public Multiples—Forward 12 Months

EV/NTM Revenue



Investors Are Focused on Growth and Profitability

Partners will look to growth and profit as a factor. See below for 23E/22E revenue growth and 23E "Rule of 40" vs. EV/23E revenue multiples.



Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of June 30, 2022. All financials calendarized to a December year-end.

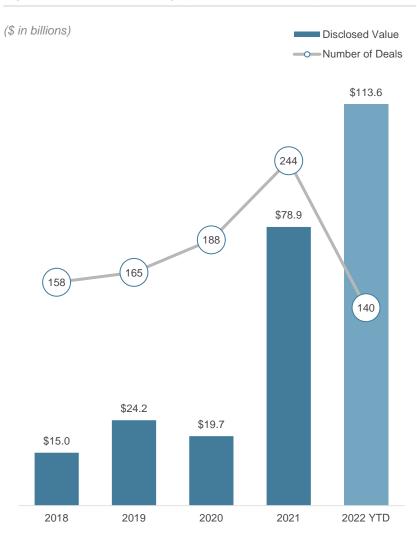
⁽¹⁾ Acquisition announced/pending; SailPoint is based on unaffected price as of 4/10/2022.

⁽²⁾ Acquisition announced/pending; Tufin is based on unaffected price as of 4/5/2022.

⁽³⁾ With Secure based on financials prior to the demerger of Consumer security into F-Secure.

M&A Remains an Exciting Exit for Cyber Companies

Cyber M&A Summary (2018–2022 YTD)



Select Transactions

Ann. Date	Acquirer	Target	Subsector	EV \$M	EV/Rev
6/20/22	Charter COMCAST		Identity and Access Management	\$50	NA
6/1/22	RELIAQUEST	digital shadows_	Digital Threat Management	\$160	6.4x
5/26/22	. BROADCOM¹	vm ware [®]	Cloud Security	\$69,207	5.3x
5/23/22	PARSONS	Xator	Security and Consulting Services	\$400	1.3x
5/17/22	THALES	MAXIVE	MSSP	\$125	1.9x
5/3/22	LexisNexis*	BehavioSec	Identity and Access Management	\$140	17.5x
4/27/22	SYNOPSYS°	WhiteHat SECURITY	Application Security	\$330	4.4x
4/26/22	() tenable	BIT	Risk and Compliance	\$45	8.9x
4/12/22	KKR	Barracuda	Network and Infrastructure Security	\$4,000	7.3x
4/11/22	THOMABRAVO	SailPoint	Identity and Access Management	\$6,900	14.9x
4/11/22	Kaseya	datto	Data Security	\$6,200	9.6x
4/6/22	TURN // RIVER	tufın	Network and Infrastructure Security	\$570	4.9x

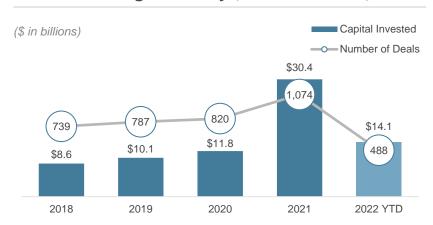
Sources: PitchBook, 451Research as of June 30, 2022. Note: NA indicates not publicly available.

Cyber Is Drawing Growth Equity as Well

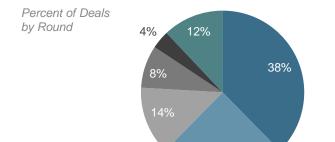
■ Seed ■ Series A

Series BSeries CSeries D+PE Growth

Private Funding Summary (2018–2022 YTD)



Private Funding by Round (2022 YTD)



(\$ in millions)	Seed/	Series	Series	Series	Series	PE
	Angel	A	B	C	D+	Growth
Median Post- Money Valuation	\$15	\$56	\$140	\$540	\$2,600	\$2,500

25%

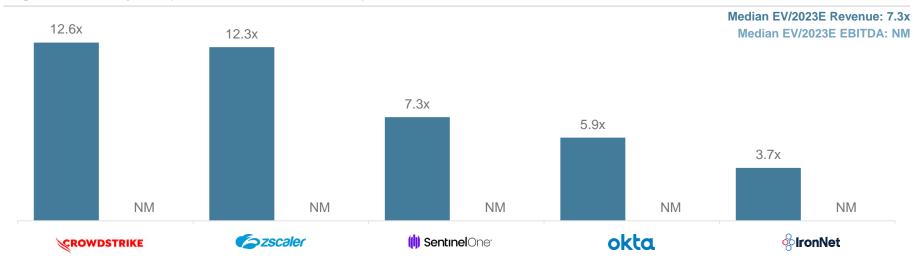
Select Minority Transactions(1)

Ann. Date	Lead Investor	Target	Subsector	Amt. (\$M)	Val. (\$M)
6/22/22	Accel	ii; veza	Data Security	\$110	\$500
6/8/22	CRAFT	Vanta	Identity and Access Management	\$110	\$1,600
5/24/22	KKR	\$ semperis	Identity and Access Management	\$200	NA
5/11/22	FOUNDERS FUND	Material Material	Email Security	\$100	\$1,100
5/9/22	INSIGHT PARTNERS	/\bnormal	Network and Infrastructure Security	\$210	\$4,000
4/19/22	Goldman Asset Sachs Management	• FORTRESS	Network and Infrastructure Security	\$125	NA
4/19/22	GENERAL ATLANTIC	THREATLOCKER	Threat Intelligence	\$100	\$580
4/13/22	GENERAL ATLANTIC	Unico	Identity and Access Management	\$100	\$2,600
4/12/22	Advent Informational GENERAL C CATALYST	Ø sonar	Application Security	\$412	\$4,700
4/12/22	VISTA	CRITICAL START (MSSP	\$215	NA
4/7/22	(B) NOVATOR	NORD SECURITY	Web Security	\$100	\$1,600
4/5/22	Balderton. capital	Осого	Cloud Security	\$80	\$500

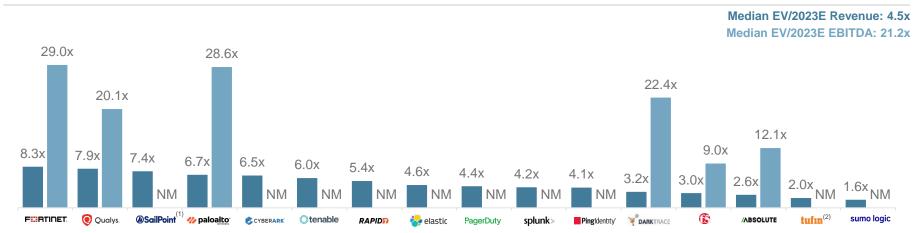
Public Company Benchmarking: EV/CY 2023E Revenue and EBITDA



High-Growth Cyber (30%+ Revenue Growth)



Medium-Growth Cyber (>10% and <30% Revenue Growth)



Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of June 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful or EV/EBITDA >30x or <0x.

Sorted by EV/2023E revenue.

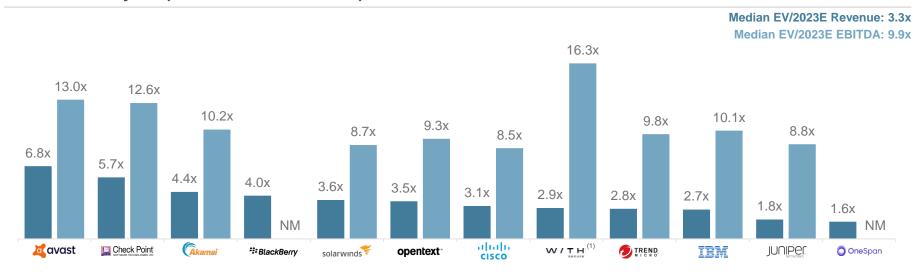
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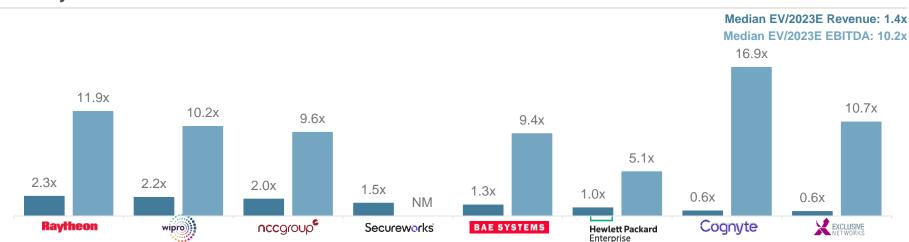
Public Company Benchmarking: EV/CY 2023E Revenue and EBITDA



Low-Growth Cyber (<10% Revenue Growth)



Security Services

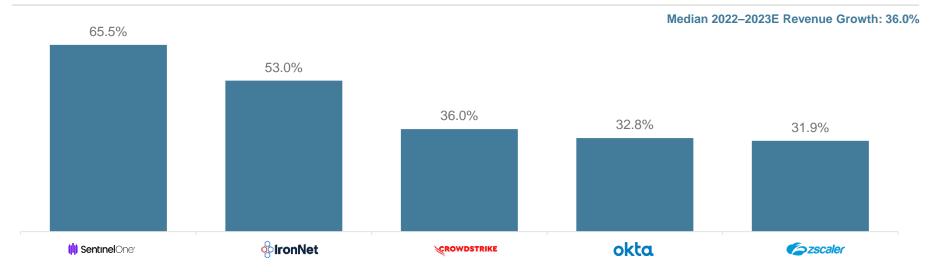


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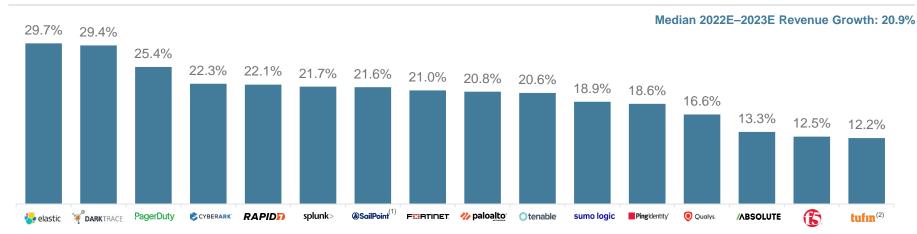
Sorted by EV/2023E revenue.

Public Company Benchmarking: CY 2022E-2023E Revenue Growth

High-Growth Cyber (30%+ Revenue Growth)



Medium-Growth Cyber (>10% and <30% Revenue Growth)



Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of June 30, 2022. All financials calendarized to a December year-end.

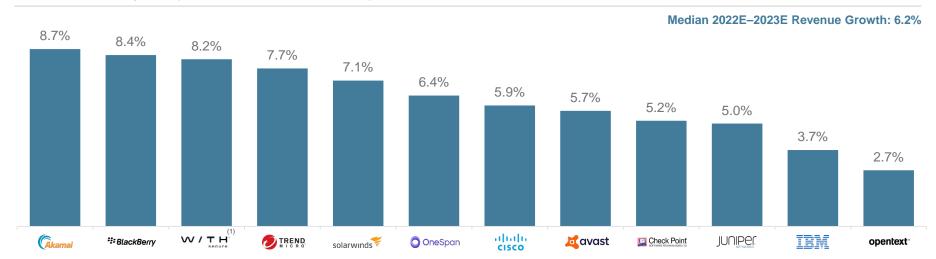
Sorted by 2022E-2023E revenue growth.

(2) Acquisition announced/pending; Tufin is based on unaffected price as of 4/5/2022.

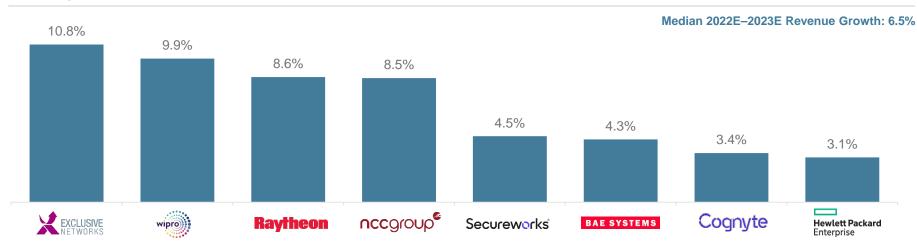
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Public Company Benchmarking: CY 2022E–2023E Revenue Growth

Low-Growth Cyber (<10% Revenue Growth)



Security Services



Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of June 30, 2022. All financials calendarized to a December year-end.

Sorted by 2022E-2023E revenue growth.

High-Growth Cyber Trading Metrics

(\$ in millions)						EV/Revenue			EV/EBITDA	
Company	Stock Price	% of 52-wk	Equity	Enterprise Value	CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E
Company	Stock Price	High	Mkt Cap	value	CT ZUZTA	CT ZUZZE	C1 2023E	C1 2021A	C1 2022E	C1 2023E
Crow dStrike	\$168.56	56.5%	\$39,132	\$37,737	26.0x	17.1x	12.6x	NM	NM	NM
Zscaler	149.51	39.8%	21,210	20,557	23.9x	16.2x	12.3x	NM	NM	NM
Okta	90.40	32.7%	14,263	14,163	10.9x	7.8x	5.9x	NM	NM	NM
SentinelOne	23.33	29.7%	6,508	4,921	24.0x	12.1x	7.3x	NM	NM	NM
IronNet	2.21	4.7%	224	192	7.0x	5.7x	3.7x	NM	NM	NM
	Top Quartile		\$21,210	\$20,557	24.0x	16.2x	12.3x	NM	NM	NM
	Mean		16,268	15,514	18.4	11.8	8.4	NM	NM	NM
	Median		14,263	14,163	23.9	12.1	7.3	NM	NM	NM
	1st Quartile		6,508	4,921	10.9	7.8	5.9	NM	NM	NM

Medium-Growth Cyber Trading Metrics

(\$ in millions)						EV/Revenue			EV/EBITDA	
Company	Stock Price	% of 52-w k High	Equity Mkt Cap	Enterprise Value	CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E
Palo Alto Netw orks	\$493.94	77.1%	\$49,214	\$49,291	10.1x	8.1x	6.7x	NM	NM	28.6x
Fortinet	56.58	76.1%	45,429	44,260	13.2x	10.1x	8.3x	NM	NM	29.0x
Splunk	88.46	50.1%	14,236	16,869	6.3x	5.1x	4.2x	NM	NM	NM
F5	153.04	61.5%	9,255	9,049	3.4x	3.3x	3.0x	16.0x	11.1x	9.0x
Elastic	67.67	35.6%	6,419	6,152	7.7x	6.0x	4.6x	NM	NM	NM
CyberArk	127.96	63.4%	5,140	4,736	9.4x	8.0x	6.5x	NM	NM	NM
Tenable	45.41	71.4%	5,022	4,919	9.1x	7.3x	6.0x	NM	NM	NM
Qualys	126.14	84.0%	4,899	4,487	10.9x	9.2x	7.9x	29.7x	23.1x	20.1x
SailPoint (1)	49.59	78.3%	4,675	4,676	11.2x	9.0x	7.4x	NM	NM	NM
Rapid 7	66.80	46.1%	3,892	4,576	8.5x	6.6x	5.4x	NM	NM	NM
Darktrace	3.58	29.4%	2,303	1,981	5.7x	4.2x	3.2x	NM	NM	22.4x
PagerDuty	24.78	49.2%	2,177	2,016	7.2x	5.5x	4.4x	NM	NM	NM
Ping Identity	18.14	59.7%	1,547	1,644	5.5x	4.9x	4.1x	NM	NM	NM
Sumo Logic	7.49	31.9%	867	564	2.3x	1.9x	1.6x	NM	NM	NM
Absolute Software	8.62	61.2%	439	649	4.2x	3.0x	2.6x	NM	12.5x	12.1x
Tufin (2)	9.03	66.9%	346	280	2.6x	2.2x	2.0x	NM	NM	NM
	Top Quartile		\$7,128	\$6,877	9.6x	8.0x	6.6x	26.3x	17.8x	27.0x
	Mean		9,741	9,759	7.3	5.9	4.9	22.9	15.6	20.2
	Median		4,787	4,626	7.4	5.7	4.5	22.9	12.5	21.2
	1st Quartile		2,019	1,897	5.2	4.0	3.2	19.4	11.8	14.1

Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of June 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x.

Sorted by market capitalization.

⁽¹⁾ Acquisition announced/pending; SailPoint is based on unaffected price as of 4/10/2022.

⁽²⁾ Acquisition announced/pending; Tufin is based on unaffected price as of 4/5/2022.

Low-Growth Cyber Trading Metrics

(\$ in millions)						EV/Revenue			EV/EBITDA	
Company	Stock Price	% of 52-wk High	Equity Mkt Cap	Enterprise Value	CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E
Cisco	\$42.64	66.3%	\$176,571	\$166,960	3.2x	3.3x	3.1x	10.4x	8.8x	8.5x
IBM	141.19	95.7%	127,350	172,808	3.0x	2.8x	2.7x	14.2x	10.6x	10.1x
Check Point	121.78	81.4%	15,624	13,889	6.4x	6.0x	5.7x	14.9x	13.3x	12.6x
Akamai	91.33	74.1%	14,641	17,378	5.0x	4.8x	4.4x	14.6x	11.0x	10.2x
OpenText	37.84	68.5%	10,131	12,973	3.8x	3.6x	3.5x	12.8x	10.2x	9.3x
Juniper	28.50	74.7%	9,208	9,709	2.1x	1.9x	1.8x	14.3x	9.7x	8.8x
Trend Micro	48.72	86.5%	6,811	4,684	2.8x	3.0x	2.8x	8.4x	10.4x	9.8x
Avast	6.28	79.7%	6,517	6,952	7.4x	7.2x	6.8x	15.9x	14.0x	13.0x
BlackBerry	5.39	44.9%	3,110	2,993	4.0x	4.4x	4.0x	NM	NM	NM
SolarWinds	10.25	29.1%	1,645	2,868	4.0x	3.9x	3.6x	NM	9.5x	8.7x
WithSecure (1)	5.23	88.5%	913	822	3.1x	3.1x	2.9x	NM	20.8x	16.3x
OneSpan	11.90	46.3%	476	368	1.7x	1.7x	1.6x	NM	NM	NM
	Top Quartile		\$14,887	\$14,761	4.3x	4.5x	4.1x	14.7x	12.7x	12.0x
	Mean		31,083	34,367	3.9	3.8	3.6	13.2	11.8	10.7
	Median		8,009	8,331	3.5	3.4	3.3	14.3	10.5	9.9
	1st Quartile		2,744	2,961	3.0	3.0	2.8	12.2	9.9	8.9

Security Services Trading Metrics

(\$ in millions)						EV/Revenue			EV/EBITDA	
Company	Stock Price	% of 52-w k High	Equity Mkt Cap	Enterprise Value	CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E
Raytheon	\$96.11	90.7%	\$144,456	\$169,596	2.6x	2.5x	2.3x	14.9x	13.5x	11.9x
BAE Systems	10.09	98.8%	32,196	36,655	1.4x	1.4x	1.3x	12.2x	9.9x	9.4x
Wipro	5.27	56.2%	28,794	26,640	2.7x	2.4x	2.2x	12.4x	11.9x	10.2x
HPE	13.26	74.7%	17,279	28,674	1.0x	1.0x	1.0x	5.9x	5.4x	5.1x
Exclusive Networks	15.51	69.7%	1,421	1,886	0.7x	0.6x	0.6x	14.4x	12.1x	10.7x
SecureWorks	10.86	40.4%	922	757	1.4x	1.6x	1.5x	NM	NM	NM
NCC Group	2.27	53.8%	703	846	2.2x	2.1x	2.0x	15.7x	10.7x	9.6x
Cognyte	4.25	14.9%	301	246	0.5x	0.6x	0.6x	8.8x	NM	16.9x
	Top Quartile		\$29,644	\$30,669	2.3x	2.2x	2.0x	14.6x	12.0x	11.3x
	Mean		28,259	33,163	1.6	1.5	1.4	12.0	10.6	10.6
	Median		9,350	14,263	1.4	1.5	1.4	12.4	11.3	10.2
	1st Quartile		867	824	0.9	0.9	0.9	10.5	10.1	9.5

High-Growth Cyber Operating Metrics

(\$ in millions)					Revenue			EBITDA		Reve	enue Growth	l e	EBI	TDA Margi	n
Company	Stock Price	Equity Mkt Cap	Enterprise Value	CY 2021A	CY 2022E	CY 2023E	CY 2021A C	Y 2022E (CY 2023E	2020-2021A 2	021-2022E 20	022-2023E	CY 2021A	CY 2022E	CY 2023E
Crow dStrike	\$168.56	\$39,132	\$37,737	\$1,452	\$2,206	\$3,000	(\$80)	\$387	\$598	66.0%	52.0%	36.0%	NM	17.5%	19.9%
Zscaler	149.51	21,210	20,557	860	1,272	1,677	(242)	183	266	60.4%	48.0%	31.9%	NM	14.4%	15.8%
Okta	90.40	14,263	14,163	1,300	1,816	2,412	(608)	(139)	(26)	55.6%	39.7%	32.8%	NM	NM	NM
SentinelOne	23.33	6,508	4,921	205	406	673	(260)	(201)	(96)	120.1%	98.4%	65.5%	NM	NM	NM
IronNet	2.21	224	192	28	34	51	(229)	(81)	(69)	NM	22.0%	53.0%	NM	NM	NM
	Top Quartile	\$21,210	\$20,557	\$1,300	\$1,816	\$2,412	(\$229)	\$183	\$266	79.5%	52.0%	53.0%	NM	16.8%	18.9%
	Mean	16,268	15,514	769	1,147	1,563	(284)	30	135	75.5%	52.0%	43.8%	NM	16.0%	17.9%
	Median	14,263	14,163	860	1,272	1,677	(242)	(81)	(26)	63.2%	48.0%	36.0%	NM	16.0%	17.9%
	1st Quartile	6,508	4,921	205	406	673	(260)	(139)	(69)	59.2%	39.7%	32.8%	NM	15.2%	16.9%

Medium-Growth Cyber Operating Metrics

(\$ in millions)				Revenue			EBITDA			Reve	EBITDA Margin				
Company	Stock Price	Equity Mkt Cap	Enterprise Value	CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E	2020-2021A 2	021-2022E 20	022-2023E	CY 2021A	CY 2022E	CY 2023E
Palo Alto Networks	\$493.94	\$49,214	\$49,291	\$4,858	\$6,087	\$7,353	(\$67)	\$1,459	\$1,724	28.4%	25.3%	20.8%	NM	24.0%	23.4%
Fortinet	56.58	45,429	44,260	3,342	4,382	5,305	730	1,236	1,525	28.8%	31.1%	21.0%	21.8%	28.2%	28.7%
Splunk	88.46	14,236	16,869	2,674	3,331	4,055	(992)	165	468	19.9%	24.6%	21.7%	NM	4.9%	11.5%
F5	153.04	9,255	9,049	2,666	2,705	3,042	566	817	1,006	10.8%	1.5%	12.5%	21.2%	30.2%	33.1%
Elastic	67.67	6,419	6,152	801	1,026	1,331	(127)	2	60	44.4%	28.1%	29.7%	NM	0.2%	4.5%
CyberArk	127.96	5,140	4,736	503	591	723	(64)	(10)	19	8.3%	17.6%	22.3%	NM	NM	2.6%
Tenable	45.41	5,022	4,919	541	676	815	(19)	60	97	22.9%	24.9%	20.6%	NM	8.9%	11.9%
Qualys	126.14	4,899	4,487	411	485	566	151	195	224	13.3%	18.0%	16.6%	36.7%	40.1%	39.5%
SailPoint (1)	49.59	4,675	4,676	417	518	630	9	(19)	16	14.2%	24.1%	21.6%	2.2%	NM	2.5%
Rapid 7	66.80	3,892	4,576	535	689	842	(79)	41	67	30.1%	28.7%	22.1%	NM	6.0%	8.0%
Darktrace	3.58	2,303	1,981	347	473	612	10	52	89	48.2%	36.0%	29.4%	3.0%	11.0%	14.5%
PagerDuty	24.78	2,177	2,016	281	367	460	(93)	(1)	16	31.8%	30.3%	25.4%	NM	NM	3.4%
Ping Identity	18.14	1,547	1,644	299	337	400	(60)	(1)	23	22.9%	12.7%	18.6%	NM	NM	5.6%
Sumo Logic	7.49	867	564	242	291	346	(113)	(84)	(84)	19.5%	20.2%	18.9%	NM	NM	NM
Absolute Softw are	8.62	439	649	155	217	246	8	52	53	39.1%	39.8%	13.3%	5.1%	23.8%	21.7%
Tufin (2)	9.03	346	280	109	125	141	(23)	(24)	(21)	8.6%	14.5%	12.2%	NM	NM	(15.0%)
	Top Quartile	\$7,128	\$6,877	\$1,267	\$1,446	\$1,759	\$9	\$172	\$285	30.5%	29.1%	22.2%	21.7%	27.1%	22.6%
	Mean	9,741	9,759	1,136	1,394	1,679	(10)	246	330	24.4%	23.6%	20.4%	15.0%	17.7%	13.1%
	Median	4,787	4,626	460	555	676	(41)	46	64	22.9%	24.8%	20.9%	13.2%	17.4%	11.5%
	1st Quartile	2,019	1,897	295	359	445	(82)	(3)	18	14.0%	17.9%	18.1%	3.5%	6.7%	4.0%

Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of June 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x.

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Low-Growth Cyber Operating Metrics

(\$ in millions)					Revenue		EBITDA		Rever	EBITDA Margin					
Company	Stock Price	Equity Mkt Cap	Enterprise Value	CY 2021A CY 2022E CY 2023E		CY 2021A CY 2022E CY 2023E			2020-2021A 2021-2022E 2022-2023E			CY 2021A CY 2022E CY 2023E			
Cisco	\$42.64	\$176,571	\$166,960	\$51,549	\$51,360	\$54,398	\$15,990	\$18,898	\$19,747	7.3%	NM	5.9%	31.0%	36.8%	36.3%
IBM	141.19	127,350	172,808	57,351	60,949	63,228	12,189	16,233	17,138	3.9%	6.3%	3.7%	21.3%	26.6%	27.1%
Check Point	121.78	15,624	13,889	2,167	2,302	2,421	930	1,042	1,098	4.9%	6.2%	5.2%	42.9%	45.3%	45.4%
Akamai	91.33	14,641	17,378	3,461	3,655	3,972	1,194	1,576	1,707	8.2%	5.6%	8.7%	34.5%	43.1%	43.0%
OpenText	37.84	10,131	12,973	3,436	3,599	3,698	1,010	1,271	1,391	4.1%	4.8%	2.7%	29.4%	35.3%	37.6%
Juniper	28.50	9,208	9,709	4,735	5,120	5,378	677	996	1,101	6.5%	8.1%	5.0%	14.3%	19.5%	20.5%
Trend Micro	48.72	6,811	4,684	1,653	1,549	1,669	561	451	480	NM	NM	7.7%	33.9%	29.1%	28.8%
Avast	6.28	6,517	6,952	941	971	1,026	438	497	536	5.4%	3.1%	5.7%	46.5%	51.2%	52.3%
BlackBerry	5.39	3,110	2,993	743	685	742	(30)	(61)	(84)	NM	NM	8.4%	NM	NM	NM
SolarWinds	10.25	1,645	2,868	719	739	792	94	303	328	0.3%	2.8%	7.1%	13.1%	41.0%	41.4%
WithSecure (1)	5.23	913	822	269	263	285	25	39	50	NM	NM	8.2%	9.2%	15.0%	17.6%
OneSpan	11.90	476	368	214	216	230	(19)	(6)	(2)	NM	0.6%	6.4%	NM	NM	NM
	Top Quartile	\$14,887	\$14,761	\$3,780	\$4,021	\$4,323	\$1,056	\$1,347	\$1,470	6.7%	6.2%	7.8%	34.3%	42.6%	42.6%
	Mean	31,083	34,367	10,603	10,951	11,487	2,755	3,437	3,624	5.1%	4.7%	6.2%	27.6%	34.3%	35.0%
	Median	8,009	8,331	1,910	1,925	2,045	619	747	817	5.2%	5.2%	6.2%	30.2%	36.1%	37.0%
	1st Quartile	2,744	2,961	737	725	779	77	237	259	4.0%	3.1%	5.1%	16.0%	27.3%	27.5%

Security Services Operating Metrics

(\$ in millions)			Revenue			EBITDA			Reve	enue Growth	EBITDA Margin				
Company	Stock Price	Equity Mkt Cap	Enterprise Value	CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E	2020-2021A 2	2021-2022E 20	022-2023E	CY 2021A	CY 2022E	CY 2023E
Raytheon	\$96.11	\$144,456	\$169,596	\$64,388	\$68,328	\$74,202	\$11,374	\$12,518	\$14,213	13.8%	6.1%	8.6%	17.7%	18.3%	19.2%
BAE Systems	10.09	32,196	36,655	26,433	27,074	28,242	3,011	3,686	3,898	0.4%	2.4%	4.3%	11.4%	13.6%	13.8%
Wipro	5.27	28,794	26,640	9,996	11,252	12,363	2,143	2,243	2,605	18.9%	12.6%	9.9%	21.4%	19.9%	21.1%
HPE	13.26	17,279	28,674	27,912	28,448	29,324	4,837	5,339	5,651	3.9%	1.9%	3.1%	17.3%	18.8%	19.3%
Exclusive Networks	15.51	1,421	1,886	2,824	3,052	3,382	131	156	176	22.1%	8.0%	10.8%	4.6%	5.1%	5.2%
SecureWorks	10.86	922	757	535	482	503	(12)	(60)	(71)	NM	NM	4.5%	NM	NM	NM
NCC Group	2.27	703	846	377	396	429	54	79	89	6.1%	4.8%	8.5%	14.2%	19.9%	20.6%
Cognyte	4.25	301	246	474	382	395	28	(36)	15	6.9%	NM	3.4%	5.9%	NM	3.7%
	Top Quartile	\$29,644	\$30,669	\$26,802	\$27,417	\$28,513	\$3,468	\$4,099	\$4,336	16.3%	7.6%	8.9%	17.5%	19.6%	19.9%
	Mean	28,259	33,163	16,617	17,427	18,605	2,696	2,991	3,322	10.3%	6.0%	6.6%	13.2%	15.9%	14.7%
	Median	9,350	14,263	6,410	7,152	7,873	1,137	1,200	1,390	6.9%	5.5%	6.5%	14.2%	18.5%	19.2%
	1st Quartile	867	824	520	460	485	47	50	70	5.0%	3.0%	4.1%	8.7%	14.8%	9.5%

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