

## Cyber Security

## Channel checks suggest accelerating cyber budgets and improving macro conditions

Industry Overview

**We came away positive from our latest partner checks**

We recently conducted calls with channel partners and the feedback suggests solid C4Q23 deal activity, largely improving on the first nine months of 2023 and reflecting more typical 4Q budgets as well as improving sales cycles and deal sizes. Procurement processes and vendor selection decisions are also slowly reverting back to the CISO from CFO when budgets were tighter. Partners noted that cybersecurity awareness is at an all-time high, partly driven by AI expanding the threat landscape, potentially leading to a strong 2024. We highlight a better macroeconomic environment, improving deal terms, AI, Cloud and SASE adoption as key growth drivers.

**Endpoint security deployments strong to end 2023**

We believe EDR deployments were strong in C4Q23 and have remained a key priority for 2024. We upgraded SentinelOne today to Buy from Neutral ([see report](#)) and flag several positives. SentinelOne has maintained strong relationships with channel partners and saw solid deal activity in C4Q23 and 1Q. CrowdStrike should also have a solid quarter, and we note its latest focus on solidifying partner relationships, with most of operational responsibilities recently transferred to President Michael Sentonas, who works closely with channels and partnerships. The company likely saw a strong deal flow in C4Q23, although a few deals may have slipped to C1Q24. CrowdStrike remains the go-to EDR vendor for vendor consolidation, with strong growth in Cloud security. Per our calls, Palo Alto Networks also continues to see growing adoption for its Cortex solution.

**Firewall market digestion; strong SASE adoption in 4Q**

Feedback suggests that firewall deployments in 4Q improved QoQ, especially for software solutions, yet the market is undergoing a period of digestion after a strong CY22. On the other hand, SASE adoption continued to gain ground in C4Q23, with particular strength at mid-enterprises and SMBs. Zscaler and Palo Alto remain the notable vendors, especially for enterprises, yet partners are beginning to ramp with Cloudflare in the SMB segment as they build out their channel program. We highlight Fortinet's SASE's focus within the SMB market, which is still a nascent revenue source, though a promising one.

**Identity remains a key spending priority, focus on PAM**

Partners saw strong identity spending in CY23, accelerating in 2Q through 4Q. However, partners are beginning to see slowdown at Okta on the back of recent breaches, with increasing hesitancy from customers. They also note that Microsoft has launched an aggressive campaign to displace Okta with some early success. In PAM, CyberArk remains a must-have vs. nice-to-have product, and partners expect industry tailwinds like data privacy and expanding definition of privileged users to fuel another year of growth.

**Cloud security deal flow continues to impress**

Cloud security remains top of mind, with strong growth and deal activity in C4Q23 and C1Q24 so far. SentinelOne's solution is still in the early innings, while Wiz's technology remains best-of-breed, though at a slight premium to peers. Palo Alto and CrowdStrike continue to gain momentum and benefit from cross-selling to existing customers.

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**See our related notes:**[SentinelOne Upgrade to Buy](#)[CrowdStrike 4Q preview](#)[Palo Alto Networks 2Q preview](#)[Zscaler 2Q preview](#)[Okta 4Q preview](#)

**\*Please see pages 2-5 for partner commentary\***

**Abbreviations:**

CISO = Chief Information Security Officer

CFO = Chief Financial Officer)

SASE = Secure Access Service Environment

EDR = Endpoint Detection & Response

SMBs = small to medium-sized businesses

PAM = privilege access management

## Partner Commentary

We include below some commentary from our latest channel checks and have separated them by key themes and vendors.

### Macro impacts and cybersecurity budgets in 2024

“Now that the US has produced a nice GDP, I’d think most cyber executives will not cut budgets, especially with AI and new testing processes. Expecting 1H growth a little slower at high single-digits. Growth should accelerate in 2H and ramp to ~mid-to-high teens. Overall full-year expectations are strong so far.” – **North American Partner**

“We do continue to see some macro impacts, but more so depends on the size of the company. Everyone needs cybersecurity products. Every conversation around IT requires some cybersecurity angle. This is part of the reason why MSSPs have grown so quickly as they have more expertise to offer at times.” – **North American Partner**

“Deals continue to take longer and this is partially driven by increasing competition across the key sub-sectors within cybersecurity. Consolidation is a key theme that we’ve been seeing lately with customers continuing to reduce their number of solutions and vendors. We expect the number of platform vendors to continue shrinking.” – **Global Partner**

“Seeing more 1-yr contracts with the SMBs, 1-2yrs in mid-market, larger contracts in the enterprise space. Depends on budgets and size of businesses. Healthcare and financial services have more regulations to get through, which is another factor that has slowed down some sales cycles.” – **North American Partner**

“Retail customers have been hit the hardest. They tend to prefer one-year deals right now and plan to renew with multi-year deals starting in 2025.” – **Global Partner**

“Overall, expecting strong growth in SASE, identity security, and Cloud security this year.” – **Global Partner**

### Artificial Intelligence (AI)

“AI is partially driving our stronger growth expectations in 2024 because companies need new training and there’s a lot to learn within the AI space. Everyone is still at the early stages of trying to evaluate the new threat landscape. This could help drive the 2H strength vs. maybe slower growth in 1H.” – **North American Partner**

“We have been getting so many questions from our customers about AI capabilities of the cybersecurity vendors. We expect this piece of the business to go through a major growth cycle. CrowdStrike right now has the best story within AI and were very early to the game. Overall, still mainly at the idea stage and haven’t seen many deals done for AI specifically within cybersecurity. Not much in terms of wallet share yet.” – **Global Partner**

“AI is driving a much higher volume of sophisticated attacks. I’ve never seen so many sophisticated attacks come across my desk.” – **Global Partner**

“We’re still just scratching the surface with AI within cybersecurity. One way to also look at it is that a lot of these vendors have trouble with hiring cybersecurity experts, so if you can incorporate some AI to help your security analysts ramp with new technologies, that could lend to some growth.” – **Global Partner**

### Deal flow in C4Q23 & C1Q24 vs. prior quarters

“We saw deal flow ramp up in 4Q vs. the prior 2023 quarters, with some more common end-of-year budget flushes.” – **North American Partner**

“Seeing a pretty steady increase in deal flow over the last few quarters. 4Q was better than the prior quarters of 2Q & 3Q. 4Q is always our strongest quarter and comprises a sizable percentage of our full-year revenues.” – **Global Partner**

“For our enterprise customers, we saw the typical budget flush. We hit nearly all of our targets for the main cyber vendors.” – **North American Partner**

“From what I see so far, already seeing a strong 1Q partially due to deals that slipped in 4Q and already closed this quarter. This was across many of the major vendors. Expecting a strong 2024 vs. last year. I have not had one conversation with a CISO where the spending levels will be down this year vs. last year.” – **Global Partner**

“We just had our best January ever. Our forecasts for this year are very positive so far. While there are some macro impacts or concerns on a global scale, cybersecurity is safe from that because the solutions are need-to-have, not nice-to-have. Also seeing very strong growth from cyber insurance in the past few quarters.” – **Global Partner**

## Endpoint Security

“Looking at CrowdStrike and the major EDR players, endpoint deployments remained strong at the end of the year and came out in-line with our expectations. Palo Alto was a little less and CrowdStrike a little more. Palo has been in the channel a bit longer, but they held back on some funding.” – **North American Partner**

### CrowdStrike & SentinelOne

“4Q deal flow for CrowdStrike ramped quite quickly and was largely driven by their enablement of the channel partners. We did not work with them in the beginning of 2023, but ramped up with us throughout the year. Finally started really doing deals with the partners in 4Q. Our understanding is that they have recently been focusing more on developing the channel relationships.” – **North American Partner**

“SentinelOne is one of the favorites in endpoint security and they have great relationships within the channels. Alongside Palo Alto, SentinelOne would come up more within the channel as CrowdStrike's penetration with partners was not as mature. Saw solid budget flush benefits for SentinelOne in 4Q.” – **North American Partner**

“Saw many net new customers for SentinelOne in 4Q but have not seen them take any deals from CrowdStrike. SentinelOne continues to win with the smaller customers, while CrowdStrike beats them head-to-head at larger enterprises.” – **Global Partner**

“We have seen a good majority of the mid-market that has already made the transition away from legacy vendors to the SentinelOne's and CrowdStrike's of the world.” – **Global Partner**

“CrowdStrike is still 15-25% more expensive than SentinelOne, though they have more of the platform consolidation focus.” – **North American Partner**

### Microsoft

“Seeing Microsoft's solutions getting better for Endpoint Security within the enterprise space, yet CrowdStrike and SentinelOne are still way ahead on technology. I've only seen one enterprise customer switch to customer and it mainly came down to pricing.” – **Global Partner**

“Some CrowdStrike deals in 4Q slipped to 1Q24. One larger enterprise in the oil and gas industry switched to Microsoft from CrowdStrike, but they have very weak SOC and it was largely a pricing thing.” – **Global Partner**

### Palo Alto Networks

“For Palo Alto, they were less hesitant in 2H than typical trends. Saw a little less business through us. Mostly Cortex. They may have focused on other areas this past quarter than focusing on partner channels for endpoint security.” – **North American Partner**

“We have seen growing traction for Palo Alto's Cortex solution within the EDR space. The company's solution and ability to compete against the key endpoint security vendors

has improved significantly, largely from a platform consolidation and cross-sell perspective. If a Palo customer is already using them for firewall, see them definitely taking share in endpoint.” – **Global Partner**

## Network Security (Firewalls and SASE)

### Firewalls

“Firewall deployments in 4Q23 were better than 3Q23. Looking back at 2022, we had the biggest year because companies like Dell and BofA couldn't wait 12-20 weeks for firewall lead times. They started to buy in advance and buying in bulk. 2022 was the biggest hardware year ever, but then 2023 hits and they had enough hardware.” –

**Global Partner**

“Was not a major flush for firewall deployments. Still seeing some impacts and pull-forward from covid. This stretched into 2023 and grew so much in 2022 that we didn't expect significant growth in 2023. Overall steady growth.” – **North American Partner**

“Still not seeing as many deals overall within firewall and deal sizes have been relatively the same in the past few quarters. 1Q typically has the sales kickoffs and we saw some deals pushed out into 2Q.” – **North American Partner**

“2022 was the largest hardware year ever for us. 2023 saw hardware sales down significantly YoY because so many customers had bought in bulk in 2022 and didn't need supply in 2023. We're selling many more software solutions now than in 2022.” – **Global Partner**

“We really like working with Fortinet and saw a massive pop in deals with Fortinet in 4Q23.” – **Global Partner**

### Secure Access Service Edge (SASE)

“SASE is one of the largest growth drivers for us this year. It also helps that we have been getting better terms from a margin perspective on SASE deals lately.” – **Global Partner**

“From our view, Zscaler is mainly the leader in SASE, though deal flow with Palo Alto has been pretty steady within the space. We also expect Cloudflare to have a good 2024 in the space.” – **North American Partner**

“SASE has stayed relatively consistent with our expectations on both vendor side and overall deployments. People are starting to understand the SASE market much more and deployments have been strong.” – **North American Partner**

“More of the enterprises we work with already had SASE than did the mid-market and SMBs. Starting to see more new deployments down market.” – **North American Partner**

“Saw ramping of deals with Cloudflare in 4Q as they continue to engage with more partners and improve relationships in the channel.” – **Global Partner**

“We saw a solid budget flush for Palo Alto within SASE in 4Q. For us, it's mainly a bundled sell with other Palo products and we don't expect pipeline to fall off in 2024.” – **North American Partner**

## Identity Security (IAM and PAM)

### Identity Access Management (IAM)

“Identity was very strong overall in 4Q, especially with the types of attacks with MFA and how cyber may change over the next few years, it seems that our customers are focused on loading up on identity security solutions. This is one of the areas that we saw especially strong spending from 2Q through 4Q. Some more significant budget dollars.”

– **North American Partner**

“In 4Q, SMBs and mid-market have been consistent throughout the year, but seeing more cautious behavior at enterprises for Okta.” – **North American Partner**

“1H23 was strong for Okta but 2H23 was weaker following some of the public breaches. Forecasting a weaker 2024 than 2023 for Okta due to the breaches. Expecting longer sales cycles and more explanations needed.” – **North American Partner**

“We’ve seen Microsoft pick up the slack from lost Okta deals. Microsoft has done an aggressive campaign to displace Okta following the recent breaches.” – **North American Partner**

### Privilege Access Management (PAM)

“PAM is continuing to stay very hot due to the nature of it and the nature of the data. 2Q and 3Q were strong” – **North American Partner**

“CyberArk’s solutions are extremely sticky and difficult to replace with other offerings.” – **Global Partner**

“CyberArk came in above our targets in 4Q and ramped nicely. Expecting decent growth in 2024 after a strong 2023. Not expecting CyberArk to be as impacted by the macro conditions. PAM remains a top priority.” – **North American Partner**

### Cloud Security

“Palo Alto and CrowdStrike are very strong in cloud security. Seeing more adoption within cloud security and more consumption/licenses, especially in the enterprise space. SMBs and mid-market have been a bit more hesitant. Palo has been strong and CrowdStrike is gaining momentum.” – **North American Partner**

“Cloud security has been a big area for cross-selling from the larger platform vendors. Mainly Palo Alto Networks and CrowdStrike. For CrowdStrike, more deals starting from EDR perspective and then expanding to cloud security.” – **Global Partner**

“Within Cloud security, we see very strong demand overall and mainly for Wiz, CrowdStrike, and SentinelOne. We have recently had good success with CrowdStrike’s and SentinelOne’s cloud security solutions, but Wiz’s solutions are much better on a technical basis. When the endpoint vendors win over Wiz, it is mainly driven by pricing and ability to consolidate several vendors under one roof.” – **Global Partner**

**Exhibit 1: Stocks mentioned**

Prices and ratings for stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
NET	NET US	Cloudflare	US\$ 99.88	C-3-9
CRWD	CRWD US	CrowdStrike	US\$ 322.44	C-1-9
CYBR	CYBR US	CyberArk Software	US\$ 263.90	C-1-9
FTNT	FTNT US	Fortinet	US\$ 69.40	B-1-9
OKTA	OKTA US	Okta Inc	US\$ 83.40	C-3-9
PANW	PANW US	Palo Alto Networks	US\$ 368.26	B-2-9
S	S US	SentinelOne	US\$ 28.99	C-1-9
ZS	ZS US	Zscaler	US\$ 242.80	C-1-9

Source: BofA Global Research

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**Price objective basis & risk****Cloudflare (NET)**

Our \$52 PO is based on roughly 10x Cy24 EV/Sales. The company has traded historically at a premium of 30-40% to high growth SaaS peers. However, we believe the company should trade in line with peers given its growth and margin profile but potential ST and LT headwinds to growth.

Upside risks to our price objective are: 1) accelerated adoption of new security and edge compute products, 2) increase in enterprise customers and the number of products they purchase.

Downside risks to our price objective are: slower adoption of security & edge compute products, product convergence leading to a shrinking market with larger competitors, accelerated commoditization in Cloudflare's core markets.

**CrowdStrike Holdings Inc. (CRWD)**

Our PO of \$365 is based on roughly 17x our CY25E EV/Sales. We choose EV/Sales as our target valuation metric due to CrowdStrike's early growth stage and investment period making the profitability level still in early stages. We believe the valuation is warranted due to CrowdStrike's higher growth profile and potential to take meaningful share in new markets that would increase TAM and potentially accelerate growth. The positives of CrowdStrike's high growth and long-term opportunities are somewhat offset by lower margins and expected growth deceleration.

Downside risks to our PO are 1) investor sentiment and sensitivity to the premium valuation levels, 2) a lower take-rate of new offerings, 3) potential slowdown in new customer adoption and expansion deals, 4) risk of security breaches, and 5) an increase in competition from incumbent vendors and newer next-generation players.

**CyberArk (CYBR)**

Our PO of \$300 is based on roughly 12x 2025E EV/Sales. This is near the middle of SaaS security peers at 10-18x. CyberArk's transition to SaaS is gaining additional momentum, which should support the multiple.

Upside risks to our price objective are difficulties in sizing the market given its newness and low market awareness, stronger conversion of qualified customers that are currently in the pipeline, and higher average deal sizes from rising license attach rates.

Downside risks are FX risk exposure (40% international exposure), difficulties sizing the market, and competition from large, well-established operators.

**Fortinet (FTNT)**

Our \$87 PO is based on roughly 27x 2025E EV/FCF. Our multiple is slightly below the hardware peer group average multiple of 25-35x and a discount to software peers as well. We believe the slightly below multiple to the hardware peer group is appropriate at this stage given the current business environment despite some recent share gains, shift to more recurring software, and expansion into adjacent security markets. New market tailwinds, such as software defined wide area networking (SD-WAN) should drive further market share gains.

Upside risks to our price objective are growth of non-FortiGate products, which could support high growth and acceleration from current levels and could result in more SaaS-like multiples and drive up the valuation.

Downside risks to our price objective are 1) product convergence leading to a shrinking market with larger competitors, 2) exposure to public spending and EMEA, 3) reputation risk if major threats missed and 4) early ordering that occurred during CY21/CY22 creates tough comps heading in CY23

#### **Okta Inc (OKTA)**

Our PO of \$64 is based on 5x FY25E EV/Sales. We note this multiple is at a discount to high growth cybersecurity peers that trade at 8-12x, yet we believe this is warranted giving potential headwinds to revenue growth and the operational challenges the company currently faces.

Upside risks to our PO are 1) higher growth rates on greater adoption of Okta's Customer Identity products, 2) higher growth rates if Okta's products warrant a premium compared to other IAM vendors and 3) margin uplift from a more efficient sales force.

Downside risks to our PO are 1) continued price erosion of Okta's core products due to more intense competition, 2) purchase pushouts of additional products should customer budgets come down and 3) lower margin ramp if execution issues worsen.

#### **Palo Alto Networks (PANW)**

Our price objective of \$390 is based on roughly 14x CY25E EV/Sales, which is above the high-end range of appliance companies, which trade at roughly 6-8x 2025E EV/Sales. The migration to Software and Cloud warrants a higher valuation, in our view, with successful SaaS vendors trading at 12-16x forward revenues.

Downside risks to our PO are increased competition and execution-related challenges as the company transitions to the cloud and SASE models.

#### **SentinelOne, Inc. (S)**

Our PO of \$35 is based on 13x our FY25E EV/Sales, a discount to the 14x multiple at which competitor CrowdStrike trades, reflecting lower scale and margins. We choose EV/Sales as our valuation metric due to S's early growth stage and investment period creating outsized operating losses in the near term. We believe our valuation is justified given SentinelOne's risk profile based on the macro environment and IT spending conditions despite the company's potential for high growth and meaningful share gains in new markets. The positives of SentinelOne's high growth and long-term opportunities are somewhat offset by lower margins.

Downside risks to our PO are 1) investor sentiment and sensitivity to the premium valuation levels, 2) a lower take-rate of new offerings, 3) material slowdown in new customer adoption and platform expansion deals, 4) risk of security breaches, and 5) an increase in competition from incumbent vendors and other next-gen players.

Upside risks to our PO are 1) increased growth within the endpoint security market, 2) higher adoption of adjacent products, 3) better-than-expected enterprise IT spending, 4)





material increase in new customer adds, and 5) further growth of offerings into new markets

### **Zscaler (ZS)**

Our PO of \$265 is based on roughly 13x CY25E EV/Sales. The multiple is a premium versus high-growth software peers (7-10x), which we justify by the higher growth profile. We believe a premium is warranted due to Zscaler's higher growth profile and potential to take meaningful share in new markets that would increase the TAM and potentially accelerate growth.

Upside risks to our PO are 1) faster-than-expected adoption of Zscaler's new products, such as Zscaler Private Access, 2) higher ASP uplift due to adoption of high-end offerings like the Cloud Next-generation firewall and Cloud Sandbox, and 3) a more significant shift to cloud-based security across enterprises of all sizes.

Downside risks to our PO are 1) a lower take-rate of new offerings, 2) material slowdown in new customer adoption and expansion deals, 3) risk of network outages or security breaches, and 4) an increase in competition from incumbent vendors and newer start-ups.

## **Analyst Certification**

We, Tal Liani and Madeline Brooks, hereby certify that the views each of us has expressed in this research report accurately reflect each of our respective personal views about the subject securities and issuers. We also certify that no part of our respective compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.



**US - Telecom and Data Networking Equipment Coverage Cluster**

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
<b>BUY</b>				
	Akamai	AKAM	AKAM US	Madeline Brooks
	Amdocs	DOX	DOX US	Tal Liani
	Arista Networks	ANET	ANET US	Tal Liani
	Check Point Software Technologies	CHKP	CHKP US	Tal Liani
	Ciena	CIEN	CIEN US	Tal Liani
	CrowdStrike Holdings Inc.	CRWD	CRWD US	Tal Liani
	CyberArk	CYBR	CYBR US	Tal Liani
	Fastly	FSLY	FSLY US	Madeline Brooks
	Fortinet	FTNT	FTNT US	Tal Liani
	Gen Digital, Inc.	GEN	GEN US	Jonathan Eisenson
	InterDigital, Inc.	IDCC	IDCC US	Tal Liani
	Motorola Solutions	MSI	MSI US	Tomer Zilberman
	Qualcomm	QCOM	QCOM US	Tal Liani
	SentinelOne, Inc.	S	S US	Tal Liani
	Zscaler	ZS	ZS US	Tal Liani
<b>NEUTRAL</b>				
	Cellebrite	CLBT	CLBT US	Tal Liani
	Cisco Systems	CSCO	CSCO US	Tal Liani
	Palo Alto Networks	PANW	PANW US	Tal Liani
<b>UNDERPERFORM</b>				
	Cloudflare	NET	NET US	Madeline Brooks
	CommScope	COMM	COMM US	Tal Liani
	F5 Inc	FFIV	FFIV US	Tal Liani
	Okta Inc	OKTA	OKTA US	Madeline Brooks
	SecureWorks	SCWX	SCWX US	Tal Liani

# Disclosures

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**Equity Investment Rating Distribution: Telecommunications Group (as of 31 Dec 2023)**

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	57	51.82%	Buy	43	75.44%
Hold	27	24.55%	Hold	17	62.96%
Sell	26	23.64%	Sell	12	46.15%

**Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)**

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

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Neutral	≥ 0%	≤ 30%
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