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CISO Compensation, Budgets and Satisfaction in Tech

IANS and Artico Search jointly published a report series for CISOs and top security executives that covers CISO compensation, security budgets, key security staff compensation and the role of the CISO.

This report is a deep dive into these topics, specific to the tech sector.

An industry-specific deep dive

Risk profiles, cyber maturity, regulatory pressures and cyberattack threat levels vary across industries. Likewise, we find CISO compensation, security budgets and satisfaction levels vary across sectors.

This industry-specific benchmark report can help CISOs in the tech sector better assess their situations against those of their peers. It offers breakouts for key subsectors, specifically, software, hardware and infrastructure, financial technology (fintech), healthcare tech, and cybersecurity vendors.

For added context, this report includes perspectives from executives at Artico Search including Matt Comyns, co-founder and president, and Steve Martano, who is a partner in Artico Search's cyber practice and a member of the IANS Faculty.

This report uses data from the 2023 Annual CISO Compensation and Budget survey, jointly fielded by IANS and Artico Search. From April until October 2023, we received survey responses from more than 660 CISOs from a diverse set of companies.

Of the survey respondents, 149 are in the tech sector. About half work at tech firms that are backed by venture capital (VC) or are founder-owned and typically have up to \$100 million in annual revenue. Thirty percent are from publicly listed tech firms that generally have revenues of more than \$1 billion. Twenty percent are companies backed by private equity (PE).

What Tech CISOs Will Get out of This Report

This report provides data and insights into four key topics areas:

- Tech CISO compensation:
 These metrics allow CISOs to benchmark their compensation
 against market rates specific to the
- against market rates specific to the tech industry and key subsectors.
- Compensation data for key
 CISO staff positions: These help
 tech CISOs evaluate the pay rates
 of their own staff against those for
 comparable roles in the same industry.
- 3. The relative size of tech organizations' security budgets: This includes data on annual budget growth, budget and security headcount metrics, and a security budget breakdown into eight spending categories.
- 4. Tech CISO job satisfaction and mobility: This helps CISOs understand their own satisfaction with key aspects of the job against the satisfaction levels of their peers in the same industry.

Compensation for CISOs in Tech

Tech CISOs' compensation spans a wide range. Total annual comp for the top 10% in the sample exceeds \$1.3 million, roughly evenly split between cash compensation and equity. This is about three times the median of \$440,000.

Even the sample's middle 50% (second and third quartiles) has a wide variance in total compensation, ranging from \$309,000 and \$795,000 (see FIGURE 1).

Top-paid tech CISOs are more likely to work at large, publicly listed tech firms

To understand the large variance in pay, we looked at the company types where the sample's tech CISOs work. The following differences emerged:

- Cybersecurity vendors, hardware/ infrastructure and fintech subsectors pay above average: In these subsectors, we see large equity distributions, which elevate the total average compensation above the tech average. The differences in cash compensation among tech subsectors is considerably smaller, ranging from \$355,000 at healthcare tech firms to \$463,000 in fintech (see Figure 2).
- Publicly listed tech firms offer bigger comp packages than privately owned ones: Annual cash compensation for CISOs at publicly listed tech firms averages \$512,000 and total comp is just under \$1 million. They are followed by CISOs who work at VC-backed tech firms, with \$395,000 in average cash comp and \$793,000 total compensation. CISOs working at PEbacked tech firms have similar cash comp, but smaller equity packages, to those at VC-backed firms.

FIGURE 1

Tech CISOs' Total Annual Compensation Distribution

Total annual comp (base salary, target bonus and equity) for U.S.-based CISOs (USD)

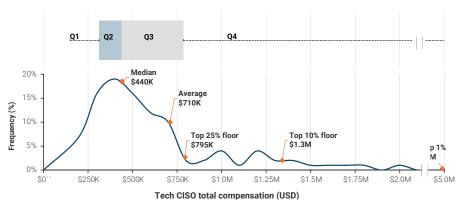
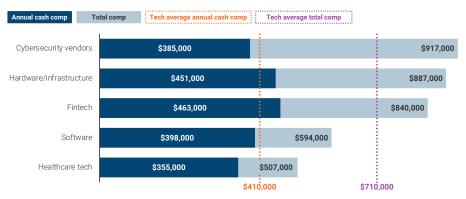


FIGURE 2

Tech CISOs' Compensation by Subsector

Average annual cash comp (base salary and target bonus) and total comp (base salary, target bonus and equity) for U.S.-based CISOs (USD)



The lowest average cash comp and total comp are at tech firms that are majorityowned by their founder (see FIGURE 3).

Steve Martano elaborates on the CISO compensation differences at tech firms:

Similar to other sectors, scale begets complexity, which leads to higher compensation packages for CISOs. Not all CISO roles are equal in tech-some are heavily productcentric roles for scaling orgs, while others are responsible for global teams and eight-figure budgets.

- · Large tech firms pay more than smaller companies: Tech firms with multibillion dollar annual revenue figures pay above-average cash compensation that exceeds \$500,000 and offer large equity packages that bring the total comp in the seven-figure range. Firms with annual earnings up to \$1 billion have, on average, much smaller equity packages, which keeps the average total comp below the tech sector average (see Figure 4).
- · Combining company type and size, large publicly listed tech firms pay the highest comp: A heat map reveals publicly listed companies, regardless of size, offer higher CISO comp than privately held tech firms, and pay increases with size. They are followed by VC-backed tech firms, which generally bring in less than \$1 billion in revenue (see FIGURE 5).

FIGURE 3

Tech CISOs' Compensation by Company Ownership

Average annual cash comp (base salary and target bonus) and total comp (base salary, target bonus and equity) for U.S.-based CISOs (USD)

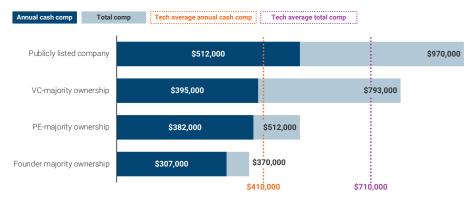


FIGURE 4

Tech CISOs' Compensation by Company Size

Average annual cash comp (base salary and target bonus) and total comp (base salary, target bonus and equity) for U.S.-based CISOs (USD)

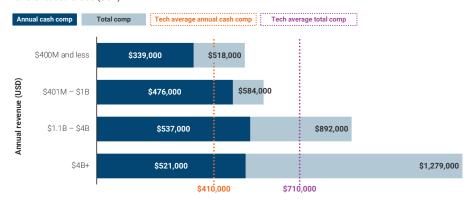
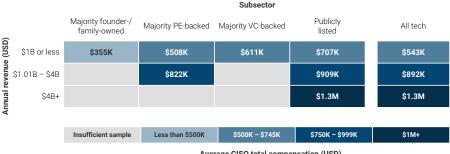


FIGURE 5

CISOs' Total Comp Heat Map: Tech Company Type vs. Size

The average total annual comp (base salary, target bonus and equity) for U.S.-based CISOs (USD)



Average CISO total compensation (USD)

Top 25% tech CISO comp averages \$1.6M

FIGURE 6 illustrates the median, top quartile and top 25% average total compensation for tech CISOs in the sample.

CISOs at hardware/infrastructure tech firms and those in fintech have the highest top 25% average comp that exceeds \$2 million and is more than five times the medians for these subsectors.

In healthcare tech, the gap between median comp (\$403,000) and the top 25% average (\$882,000) is relatively small.

A hiring slowdown in 2023 coincided with a drop in CISO movement in the market

As the economy tightened and companies squeezed their budgets and hiring, fewer CISOs switched companies. This trend was also evident in the tech sector in 2023, and the share of tech CISOs who changed employers declined from 34% in 2022 to 19% in 2023 (see FIGURE 7).

Matt Comyns sees a direct link between tech sector developments and the slowdown in CISO movement:

On the venture capital and private equity side of things, with a limited number of transactions in 2023, many CISOs decided to stay at their current firm to wait for an equity event via a transaction. Many of these CISOs' equity is tied to a successful exit and they are waiting out the market as their companies evaluate sales.

FIGURE 6

Top Quartile Total Compensation for Tech CISOs

Median, top 25% floor and average total comp (base salary, target bonus and equity) for U.S.-based CISOs (USD)

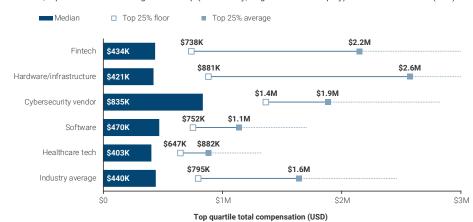
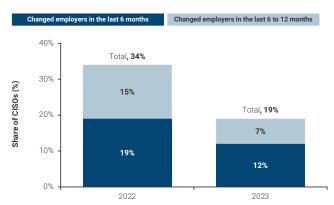


FIGURE 7

Fewer Tech CISOs Changed Jobs

The share of CISOs who indicated they changed employers recently (%)



A third of tech CISOs did not get a raise

Besides a drop in job movement, the data shows fewer tech CISOs receiving an annual wage increase in 2023 versus 2022. As FIGURE 8 illustrates, the share of CISOs in this industry with a base salary increase dropped by 18 percentage points, year-over-year (YOY).

Compared with 2022, the share of tech CISOs with increases to their bonus and/or equity was also down.

Across subsectors, the data shows differences in the shares of CISOs with salary raises in 2023. More than 80% of CISOs at healthcare tech firms and in hardware/infrastructure had increases to their base salary, compared with just 39% of cybersecurity vendor CISOs.

For 28% of tech CISOs, the total comp increase was between 1% and 5%; 11% saw their comp increase by 6% to 10%; and 28% had increases of more than 10% (see FIGURE 9).

The main reasons behind outsized comp increases are a change in employers, a retention incentive or a change in job scope.

A quarter of tech CISOs are not happy with their compensation

Higher compensation generally corresponds to greater satisfaction with compensation. Of tech CISOs with comp in the top 25%, 69% are somewhat or very satisfied with their comp versus 38% of those in the bottom 25%.

Across the sample of tech CISOs, 34% have concerns about their comp (see Figure 10).

FIGURE 8

The Share of Tech CISOs With Comp Increases, 2022-2023

Share of CISOs with increasing base salary, bonus and equity, YOY

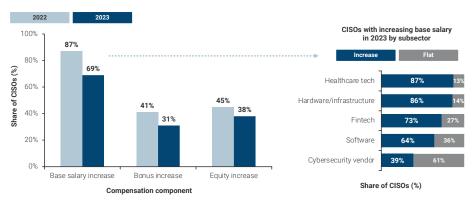
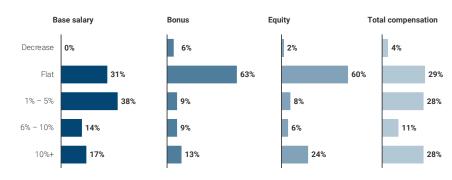


FIGURE 9

The Total Comp Did Not Increase for 33% of Tech CISOs

The average YOY increase to CISOs' base salary, bonus, equity and total comp

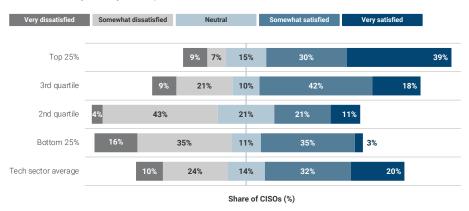


Share of tech CISOs (%)

FIGURE 10

34% of Tech CISOs Are Unhappy With Their Comp

How satisfied are you with your compensation?



Compensation for Functional Security Leaders

Tech CISOs in the sample also reported on compensation for their leadership team members, specifically for their deputy CISO and their heads of security operations (SecOps); governance, risk management and compliance (GRC); architecture and engineering (A&E); application security (AppSec); IAM; and product security.¹

FIGURE 11 illustrates the comp bands for these roles at tech companies. We distinguish between security leaders who qualify for annual equity grants and those who do not.

The reason for this is positions eligible for equity tend to be more senior and offer greater compensation, compared to positions without equity, including higher cash comp.

The head of product security role has the highest comp ranges of the seven leadership roles and an average total comp of \$416,000 when equity is offered.

The pay bands for the other leadership roles range from about \$185,000 average cash comp for a head of IAM without equity to just under \$400,000 total comp with equity for a deputy CISO.

FIGURE 12 shows the differences among the median total comp for security leadership roles in tech firms and the floor and average total comp of the top 25%.

FIGURE 11

Compensation for Functional Security Leaders in the Tech Sector

Average annual cash comp (base salary and target bonus) and total comp (base salary, target bonus and equity) for U.S.-based functional security leaders (USD)

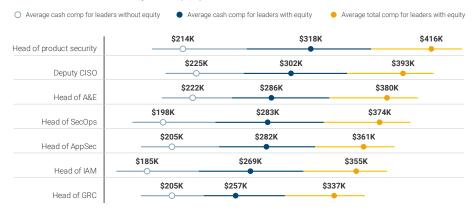
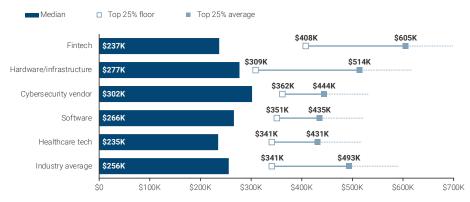


FIGURE 12

Top-Quartile Total Compensation for Security Leaders in Tech Firms

Median, top 25% floor and average total comp (base salary, target bonus and equity) for U.S.-based functional security leaders (USD)



Steve Martano comments on the pay differences by role:

We see that, once again, it's the more-technical roles that command the highest comp packages in the CISO's organization. Heads of product security—particularly at product companies—remain in high demand and command high comp packages.

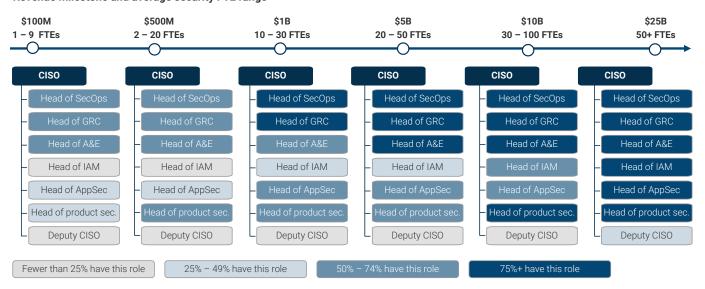
¹ These are dedicated managerial roles responsible for critical functions of the security agenda. They report directly to the CISO or head of information security.

FIGURE 13

Tech Security Org Design at Different Revenue Milestones

Typical security leadership team structure in FTE for various revenue levels in USD

Revenue milestone and average security FTE range



CISOs expand their security leadership teams as their companies grow

Using the staffing data from our CISO respondents and the nearest revenue milestones of their companies, we were able to create security leadership org charts at various stages of company revenue growth.

In the tech sector, we found security leadership teams get built out relatively early in the company's growth stages. More than half of tech firms with revenues of up to \$100 million have staffed leadership positions for SecOps, GRC and A&E in their security organization and, in some cases, leaders for AppSec and product security. By the time organizations surpass \$1 billion in annual revenue, the majority of CISOs has these roles as part of their organization.

The large tech companies with revenues exceeding \$25 billion generally have all leadership roles in their security org chart, with the exception of a deputy CISO, which some firms use for succession planning (see FIGURE 13).²

The deputy CISO role is typically seen as the CISO's successor. While it can be a stand-alone role that helps the CISO by sharing in the workload, some CISOs opt for the deputy CISO as an overlay role that combines with, for example, the head of GRC or head of SecOps role. Either way, they are seasoned leaders with 12-plus years of cyber experience.

Steve Martano shares further insight into the deputy CISO role:

The role of the deputy CISO can vary by company and by industry. While we see more senior technical roles filled earlier in the tech sector, the deputy CISO role is typically reserved for the largest of global organizations.

² The 2023 Security Organization and Compensation Study describes how the typical retail security org design compares with that of other sectors.

Security Budget Growth Declines Sharply, YOY

The impact of cost pressures in the tech sector is evident in the development of security budgets, which grew just 4% in 2023 versus 30% in 2022.

Each of the subsectors saw budget growth in the single-digit percentages, ranging from flat budget growth in 2023 for fintech firms to 5% at cybersecurity vendors, software and healthcare tech firms (see Figure 14).

The decline in security budget growth in the tech sector is steeper than that of the broader market, with average growth rates down from 17% in 2022 to 6% in 2023—a factor of the tech slowdown and layoffs in the sector that outpaced the broader market.³

Security budgets in tech average 14.4% as a percentage of IT budget

Among tech CISOs, the most commonly used key performance indicators used to determine and report on the budget status are "security budget as a percentage of the IT budget" and "security budget as a percentage of annual revenue."

Across the tech sample, security budget as a percentage of the IT budget averages 14.4%. This is higher than the overall average of 11.6% for the broader market. Notably, the software subsector is well above the sector average at 17.2%.

Security budget as a percentage of revenue averages 1.27% for the tech sample. For software, this metric is the highest at 1.62%, while fintech, hardware/infrastructure and healthcare tech are below-average for this metric (see Figure 15).

FIGURE 14

Annual Security Budget Growth for Tech Firms

YOY change in the security budget

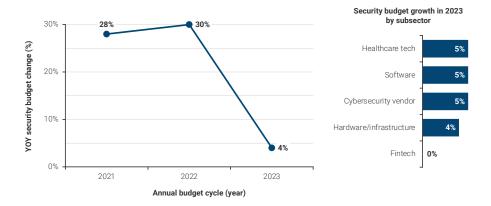
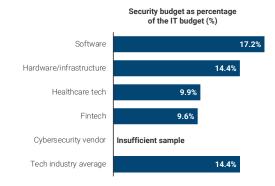
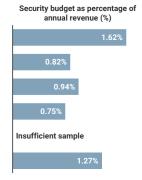


FIGURE 15

Tech Security Budgets as Percentage of IT Budgets and of Annual Revenue

The average annual security budget, expressed as a percentage of the IT budget





³ More detail about annual growth for security budgets in other sectors can be found in the 2023 Security Budget Benchmark Report.

Staff and compensation is the largest item in tech security budgets

The two largest spending categories in tech security budgets are staff and compensation (44%) and software (29%). Of software spending, tech firms dedicate the majority to off-premises (i.e., cloud) solutions.

Relative to the 38% percentage average security spend allocated to personnel costs within the broader market, the tech average of 44% is relatively high. Cybersecurity vendors have the highest percentage of staff and compensation spend, averaging 51% (see Figure 16).

FIGURE 17 contains the budget breakdown of respondents by tech subsector.

Roughly half of tech CISOs have quarterly board engagements

With boards, regulators, customers and investors all placing greater emphasis on cybersecurity, it follows that CISO engagement with the C-suite and board of directors rises. At tech firms, 47% of CISOs report to the board on at least a quarterly basis.

At cybersecurity vendors, 56% of CISOs have quarterly board interaction, whereas at fintech and healthcare tech firms that figure is below average at 41% and 44%, respectively (see Figure 18).

Matt Comyns finds a strong executive presence imperative for CISOs:

Executive presence for externally facing CISOs has continued to be a priority for tech CISOs. Because software and product are the drivers of the business, CISOs in this sector often have to be in front of customers and, potentially, regulators. Their presentations to the board are largely about customer trust and product security risk.

FIGURE 16

Staff Costs Dominate Security Budgets at Tech Firms

Breakdown of the annual security budget

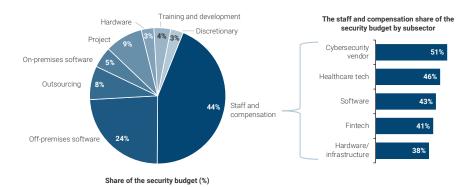


FIGURE 17

Security Budget Breakdown by Tech Subsector

Breakdown of the annual security budget

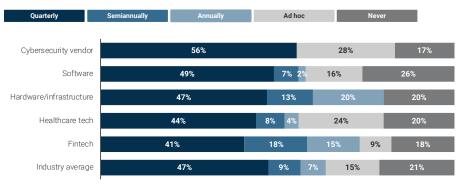
	Staff and comp	Off-premises software	Outsourcing	On-premises software	Project	Hardware	Training and development	Discretionary
Cybersecurity vendor	51%	27%	2%	3%	8%	2%	4%	3%
Healthcare tech	46%	21%	7%	5%	10%	2%	6%	3%
Hardware/ infrastructure	38%	21%	12%	8%	10%	4%	3%	4%
Software	43%	28%	8%	5%	8%	2%	3%	3%
Fintech	41%	22%	9%	7%	8%	5%	4%	3%
Tech sector average	44%	24%	8%	5%	9%	3%	4%	3%

Share of the security budget (%)

FIGURE 18

47% of Tech CISOs Have Quarterly Board Engagement

How often do you engage with your board?



Share of CISOs (%)

Job Satisfaction Has Dropped Among Tech CISOs

Sixty-one percent of tech CISOs are satisfied with their job, which is a 17-point drop from last year (see FIGURE 19).

Satisfaction is strongest among CISOs in the healthcare tech and cybersecurity vendor subsectors, with 76% and 72%, respectively, indicating they are satisfied in their job and at their company (see FIGURE 20).

Fintech and software CISOs rank low in terms of job satisfaction. Low satisfaction with compensation plays a role in job sentiments. Thirtysix percent of fintech CISOs and 41% of software CISOs aren't happy with their comp. Furthermore, 47% of software CISOs have concerns about the security budget.

Satisfaction vs. loyalty

Given the lower tech CISO rotation figures in 2023 versus prior years, and the declining job satisfaction, it isn't surprising that the majority of tech CISOs are considering a job change— "yes" and "maybe" combined (see FIGURE 21). Compared to the prior year, that figure grew by 13 points to 78%.

The three subsectors with the largest shares of CISOs open to a change (fintech, software and hardware/infrastructure) are the same subsectors with the lowest overall job satisfaction ratings.

FIGURE 19

24% of Tech CISOs Are Very or Somewhat Dissatisfied in Their Job

How satisfied are you with your job and company?

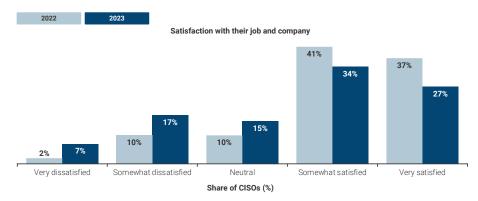


FIGURE 20

Tech CISOs' Job Satisfaction by Subsector

How satisfied are you with your role and company?

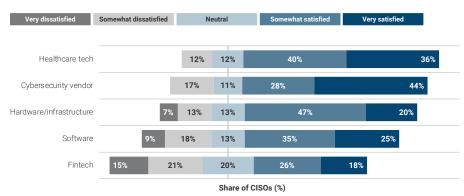
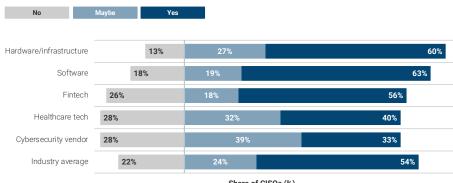


FIGURE 21

Most Tech CISOs Are Considering a Job Change

Share of CISOs who are considering a job change in the next 12 months (%)



Share of CISOs (%)

Conclusions

This report provided benchmark data and insights into CISO compensation, staff salaries, budgets and satisfaction within the tech sector. This industry comprises a diverse set of large publicly listed tech firms to midsize VC-backed tech startups in software, fintech, healthcare tech, hardware/infrastructure and cybersecurity vendors.

The sector's diversity of subsectors and organizational types is reflected in CISO compensation levels, security budgets and job satisfaction:

The total compensation of tech CISOs averages \$710,000, with a median of \$440,000

Earning averages are highest for CISOs at cybersecurity vendors, followed by those in hardware/infrastructure and fintech, with average comp packages that exceed \$800,000, including large equity shares. Comparing company types, we found that CISO comp packages are the highest at large, multibillion dollar, publicly listed companies.

Wages stayed flat for about a third of tech CISOs

With a smaller share of tech CISOs changing jobs, compared with 2022, fewer experienced wage growth from a move or retention incentive. This trend was further exacerbated by the sector's pressures to save on cost and headcount. Sixty-nine percent of tech CISOs in the sample saw their base salary increase—18 points lower than in 2022. A third of tech CISOs express dissatisfaction with their comp.

The median total comp for tech functional security leaders is around \$250,000

These leaders oversee the pillars of one or more cyber domains and report to the CISO. Among them, the head of product security role has the highest average comp, followed by the deputy CISO role and head of A&E. That said, to find and keep top talent, CISOs typically consider the top-quartile pay ranges, with averages that range between \$431,000 and \$605,000.

Tech firms' annual security budget growth dropped to 4% in 2023

This figure marks a decline in growth of 26 percentage points versus the year before. Macroeconomic challenges and cost-savings efforts caused this decline. The security spend as a percentage of the IT budget is 14.4%, on average, for tech firms in the sample. Security budgets as a percentage of annual revenue average 1.27% among tech firms.

A quarter of tech CISOs give low job satisfaction ratings

The combination of smaller budget growth and dissatisfaction with their compensation among 34% of tech CISOs is affecting job satisfaction. More tech CISOs are very or somewhat dissatisfied than in 2022 and 78% are open to a job change when the opportunity arises.

Methodology

IANS and Artico Search fielded the fourth annual CISO Compensation and Budget survey in April 2023. From April until October, we received survey responses from more than 660 security executives from companies that varied by size, location and industry. Of them, 149 respondents are from the tech sector.

They answered questions about their role, their compensation, the security budget, their satisfaction and their company. In addition, the tech CISOs provided compensation data about 265 functional security leader roles combined.

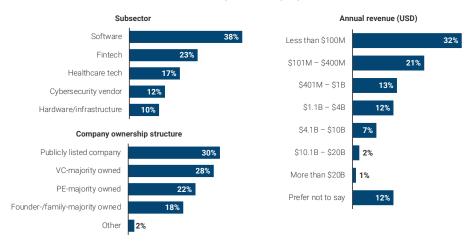
Respondents from the tech sector work at organizations ranging in size from less than \$100 million in annual revenue to those with more than \$20 billion in revenue. Sixty-eight work at privately owned companies, backed by their founder or funded with VC or PE investment and 30% are from publicly listed tech companies.

The subsectors within this sector are software, with 38% of the respondents; fintech, representing 23% of the sample; healthcare tech, representing 17% of respondents; cybersecurity vendors, with 12% of the sample; and the remaining 10% are from hardware/infrastructure firms (see Figure 22).

In the tech sample for this report, we included respondents who indicated their subsector to be fintech or healthcare tech, regardless of if they selected financial services or healthcare as their primary sector or tech as their primary sector. This added 49 respondents to the tech sector.

FIGURE 22

Breakdown of the Tech Respondents by Company Type



Key steps in the research process are:

Survey design

We improve our surveys on an ongoing basis by incorporating feedback from respondents and adding topics based on client demand.

Respondent recruitment

We recruit from last year's already-vetted respondents. We grew the sample by recruiting from diverse CISO audiences.

Data hygiene

The survey design and data collection process include precautions to prevent fake responses and survey response errors. For example, respondents can skip questions if they don't have access to the requested information.

Analysis

A five-member team runs the analysis, builds the storyline and writes the report. This is a multidisciplinary team with combined expertise in data science, cybersecurity, CISOs' key imperatives, and cyber executive talent and recruitment.

Objectivity

This research is neither influenced by nor paid for by third parties. We report on the data objectively and free from personal bias and opinions. Clarifying insights are drawn from Artico Search's cyber practice and clearly marked as quotes.

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