2018

Cybersecurity INSIDERS

THREAT INTELLIGENCE REPORT

DOMAINTOOLS®

INTRODUCTION

Threat intelligence has become a significant weapon in the fight against cybersecurity threats, and a large majority of organizations have made it a key part of their security programs.

Among the key findings of the report are that organizations are leveraging threat intelligence data for a number of use cases, and many rate themselves fairly competent in their use of threat intelligence to identify and remediate cyber threats.

The most common benefits of threat intelligence platforms include better threat analysis, faster detection and response, more efficient security operations, and better visibility into threats.

Organizations are going to need these tools as they face cyber threats such as phishing, zero-day attacks, insider attacks, advanced persistent threats, and malware, and deal with challenges including the detection of advanced threats, gaining full visibility into all assets and vulnerabilities, and the lack of advanced security staff.

We would like to thank DomainTools for supporting this unique research.

We hope you will enjoy the report.

Thank you,

Holger Schulze

Holger Schulze
CEO and Founder
Cybersecurity Insiders

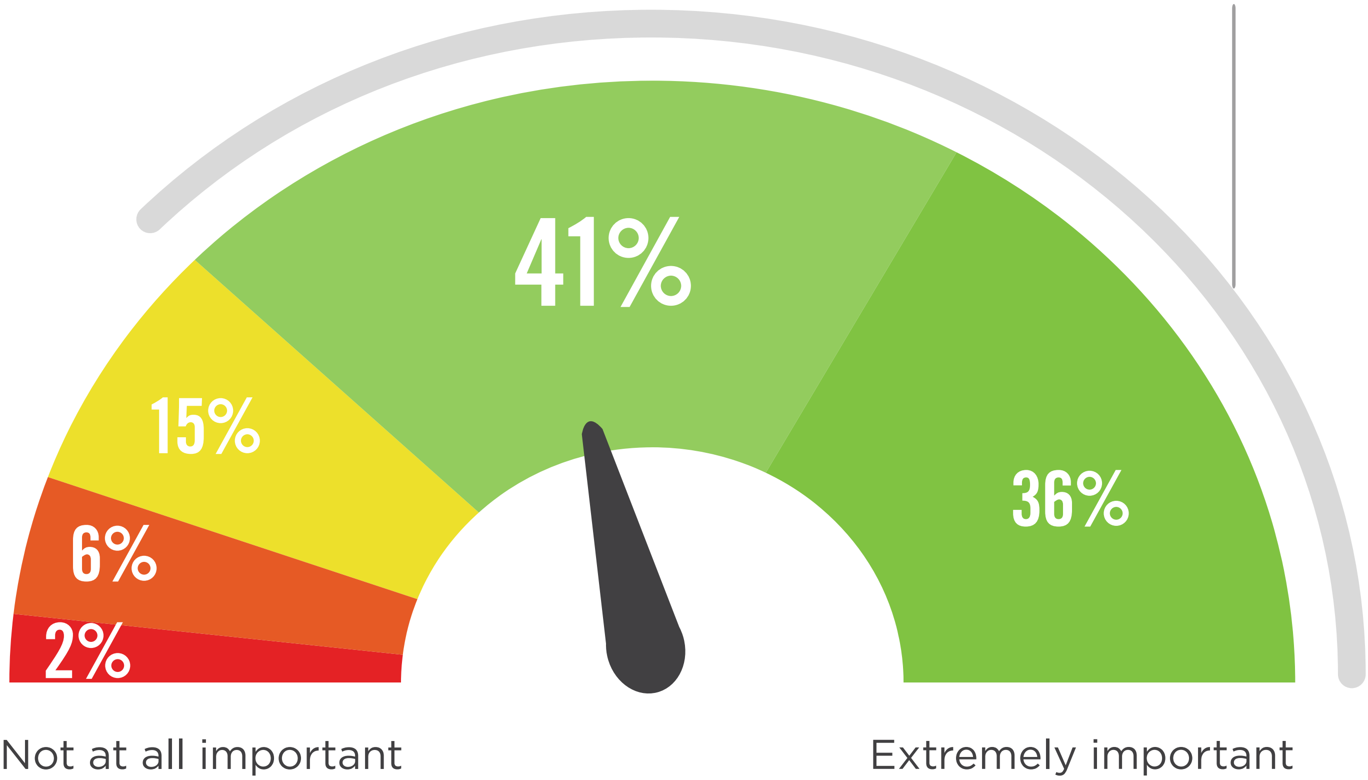
Cybersecurity INSIDERS

IMPORTANCE OF THREAT INTELLIGENCE

Threat intelligence is not just a "nice-to-have" capability at organizations anymore; it has become a vital part of robust cyber security programs. A large majority of respondents (77%) said threat intelligence is very to extremely important to their organizations' security posture. Only 8% report threat intelligence is not important.

How important is threat intelligence to your organization's security posture?

Threat intelligence is very to extremely important to organizations' overall security posture **77%**



BIGGEST CYBER THREATS

Respondents are concerned about a plethora of cyber threats, with phishing attacks leading the way, cited by more than half (56%). Other threats they're concerned about include zero-day attacks against publicly unknown vulnerabilities (47%); insider attacks, including malicious or careless insiders (46%); advanced persistent threats/targeted attacks (45%); malware, including viruses, worms, and trojans (44%).

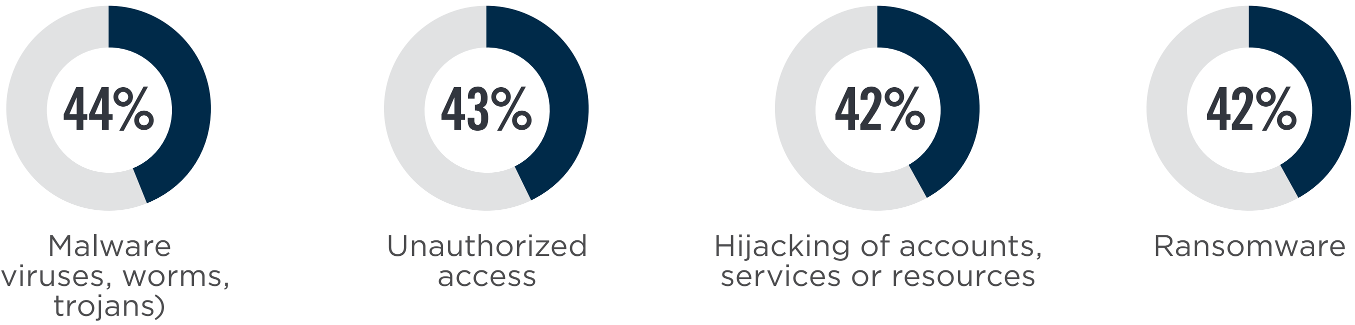
Which cyber threats are you most concerned about?

56% Phishing attacks

47% Zero-day attacks (against publicly unknown vulnerabilities)

46% Insider Attacks (Malicious or careless insiders)

45% Advanced persistent threats (APTs) /targeted attacks



Web application attacks (buffer overflows, SQL injections, cross-site scripting) 33% | Denial of service attacks (DoS/DDoS) 22% | Cryptojacking 16% | Other 4%

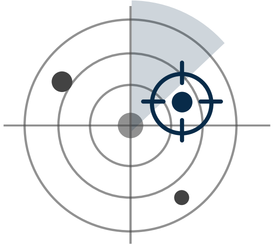
THREAT MANAGEMENT PRIORITIES

When asked to identify the most critical threat management priorities for their organization, 45% of respondents cited improving threat detection as a priority. Other priorities include proactive threat hunting (39%), improving investigating and analyzing threats (34%), and improving the blocking of threats (34%).

▶ **What are the most critical threat management priorities for your organization over the next 12 months?**

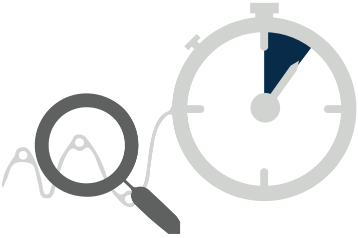
45%

Improve threat detection



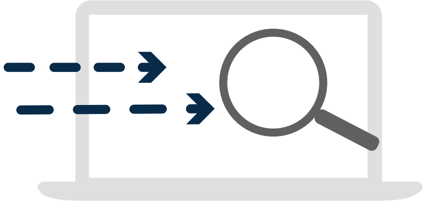
39%

Proactive threat hunting



34%

Improve investigating and analysing threats



34%

Improve lateral movement detection

Improve blocking threats 30% | Improve alerting 29% | Reduce false positive alerts 27% | Reduce unwanted / unauthorized traffic 23% | Automate incident response 21% | Improve enforcement of usage policies 19% Aggregate security alerts 17% | Other 1%

USE CASES FOR THREAT DATA

Organizations are leveraging their cyber threat intelligence data for a number of use cases. Easily the most common use case is detecting threats and attacks, cited by 58% of the respondents. Other uses include incident response (49%). vulnerability management (45%). blocking threats (44%), blocking malicious domains or IP addresses at egress points such as firewalls and threat intelligence gateways (43%).

What are the top use cases for your cyber threat intelligence data?

58%

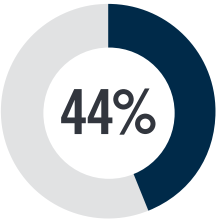
Detecting threats and attacks

49%

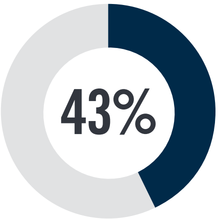
Incident response

45%

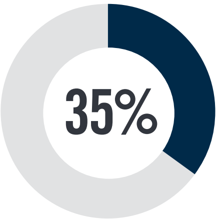
Vulnerability management



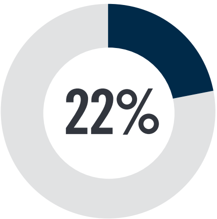
Blocking threats



Blocking malicious domains or IP addresses at egress points



Proactively hunting for indicators of compromise



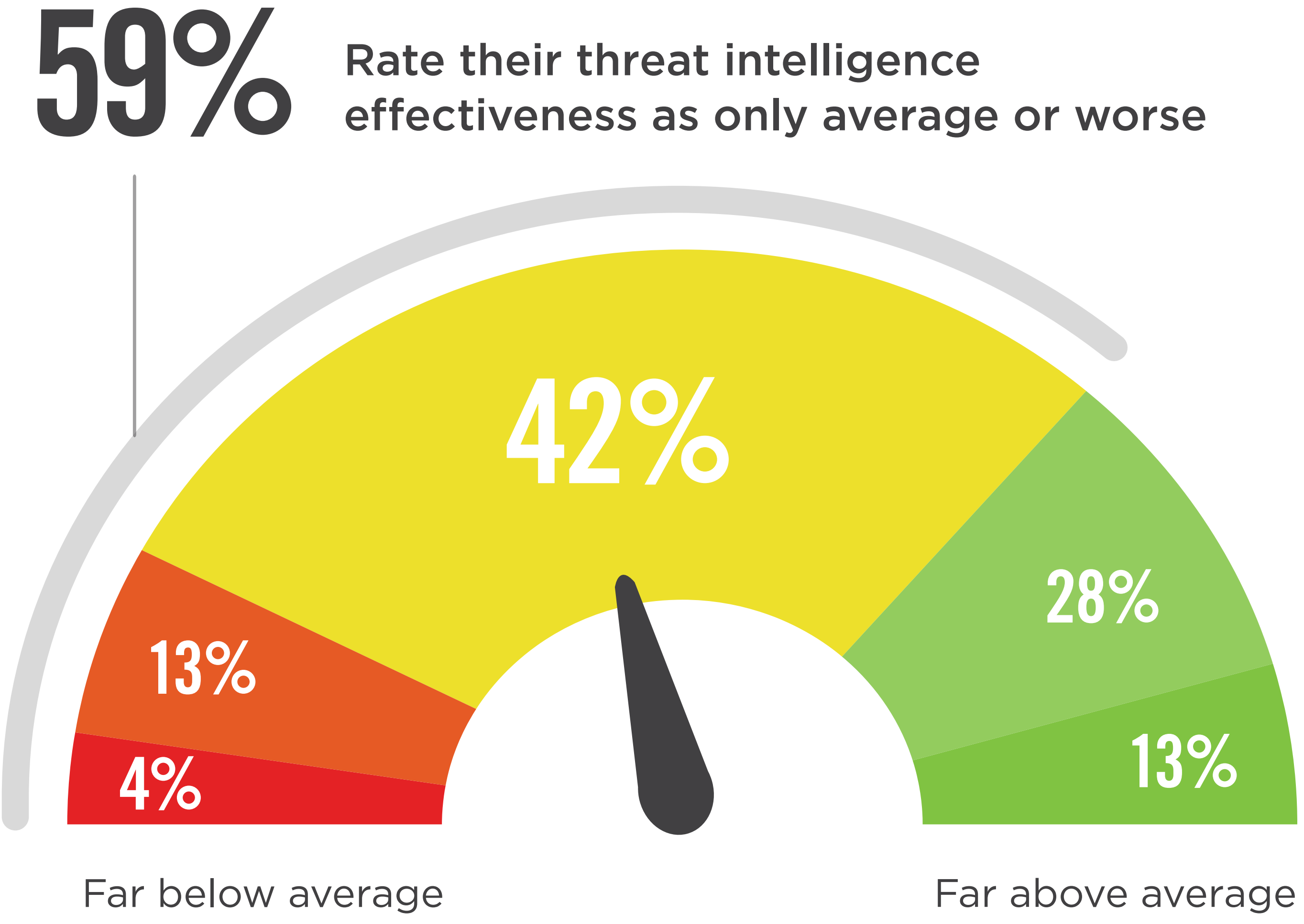
Adding context to investigations or compromise assessments

Providing trending data and reports to team and management 20% | Examining DNS server logs for malicious domains or IP addresses 18% | Building custom IDS signatures for malicious traffic 10% | Adding internally generated indicators to commercial indicators to track campaigns 10% | Other 3%

RATING THREAT INTELLIGENCE EFFECTIVENESS

A majority of respondents (59%) rate their organization's effectiveness in leveraging threat intelligence to identify and remediate cyber threats as only average or worse. Only a small group (13%) rate their organizations as far above average.

How would you rate your organization's effectiveness in using threat intelligence to identify and remediate cyber threats?



BENEFITS OF THREAT INTELLIGENCE

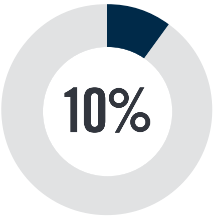
The most common benefit of threat intelligence platforms is better threat analysis, cited by 20% of the respondents. Other benefits include faster detection and response (18%), more efficient security operations (12%), better visibility into threats (10%), and better prioritization of indicators of compromise (10%). Fewer mentioned benefits such as better collection of threat data, reduced staff workload through automation, better threat remediation, and better reporting of threat management.

What main benefit is your threat intelligence platform providing?

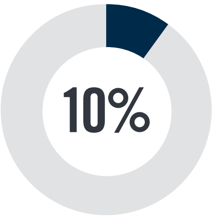
20% Better threat analysis

18% Faster detection and response

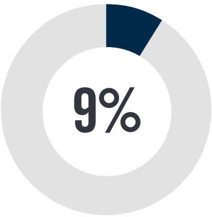
12% More efficient security operations



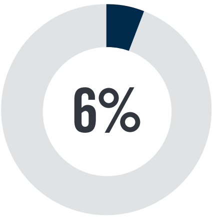
Better visibility into threats



Better prioritization of indicators of compromise (IOC)



No benefits



Better collection of threat data

Reduced staff workload through automation 5% | Better threat remediation 5% | Better reporting of threat management 3% | Other 3%

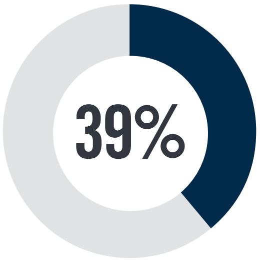
CHALLENGES FOR SECURITY TEAMS

Detection of advanced threats, whether they're hidden, unknown, or emerging, is the most common challenge security teams face. That was cited by 43% of the respondents. Among the other challenges teams are facing are getting full visibility to all assets and vulnerabilities across the entire environment (39%), the lack of advanced security staff to oversee threat management (35%), detection and/or mitigation of insider threats (32%), lack of visibility into context around threats (30%), monitoring threats from mobile devices (30%), and too much time wasted on false positive alerts (29%).

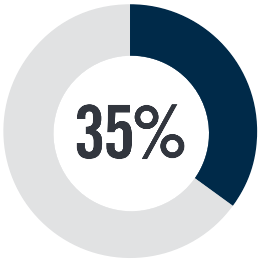
Which of the following do you consider to be top challenges facing your security team?

43%

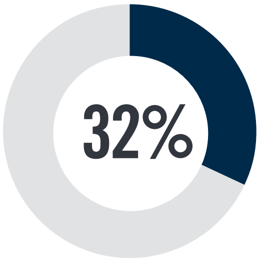
Detection of advanced threats (hidden, unknown, and emerging)



Getting full visibility to all assets and vulnerabilities across the entire environment



The lack of advanced security staff to oversee threat management



Detection and/or mitigation of insider threats

Lack of visibility into context around threats 30% | Monitoring threats from mobile devices 20% | Too much time wasted on false positive alerts 29% | Lack of confidence in automation tools catching all threats 26% | Monitoring security of cloud infrastructure 25% | Slow response time to advanced threats 25% | Working with outdated SIEM tools and SOC infrastructure 18% | Lack of proper reporting tools 16% | Other 6%

CYBERSECURITY BARRIERS

Lack of skilled/trained staff is the most common barrier inhibiting organizations from adequately defending against cyber threats, cited by just more than half the respondents. Other common barriers are lack of budget (41%), too many false positives (34%), lack of security awareness among employees (34%), lack of visibility into network traffic and other processes (25%), and poor integration/interoperability between security solutions (24%).

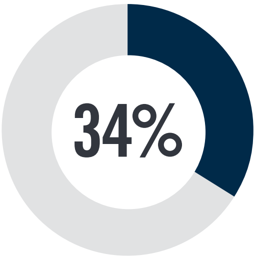
Which of the following barriers inhibit your organization from adequately defending against cyberthreats?

53%

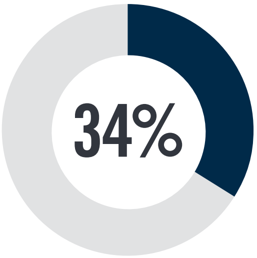
Lack of skilled /trained staff

41%

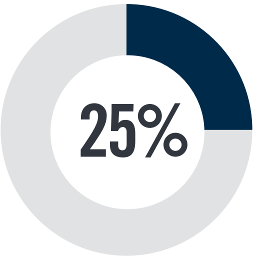
Lack of budget



Too many false positives



Lack of security awareness among employees



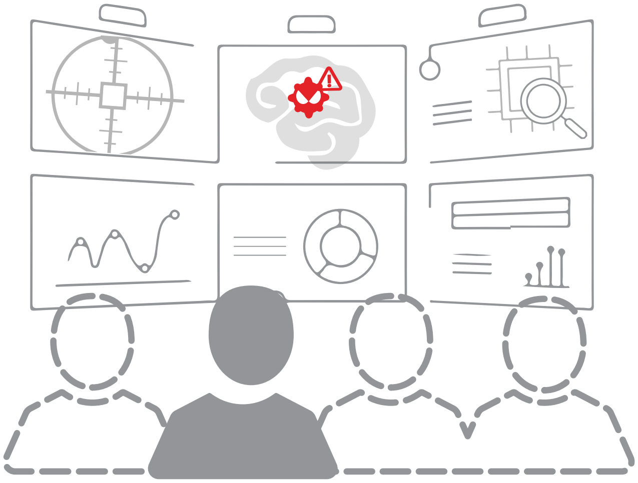
Lack of visibility into network traffic and other processes

Poor integration/interoperability between security solutions 24% | Lack of collaboration between separate departments 23% | Lack of management support/awareness/buy-in 23% | Inability to justify additional investment 22% | Insufficient or inadequate tools available in house 22% | Lack of contextual information from security tools 22% | Difficulty in implementing new security systems/tools 21% | Lack of effective security solutions available in the market 11% | Other 5%

THREAT INTELLIGENCE CHALLENGES

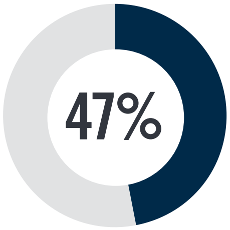
Organizations face several challenges in leveraging threat intelligence. 57% of respondents noted the lack of security staff needed to make threat intelligence actionable, 47% noted they lack the resources to access external threat intelligence, and 39% have difficulty integrating threat intelligence into existing security controls. Also, 39% are not able to effectively and efficiently take action using threat intelligence to prevent threats, and 31% struggle to manage and maintain multiple sources of threat intelligence.

What are the top challenges your organization faces in using threat intelligence?

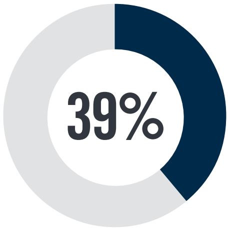


57%

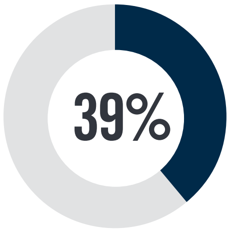
Lack the security staff to make threat intelligence actionable



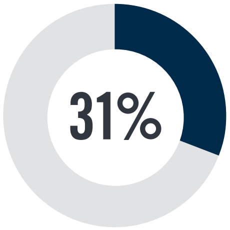
Lack the resources to access external threat intelligence



Difficulty integrating threat intelligence into existing security controls



Inability to effectively and efficiently take action using threat intelligence to prevent threats

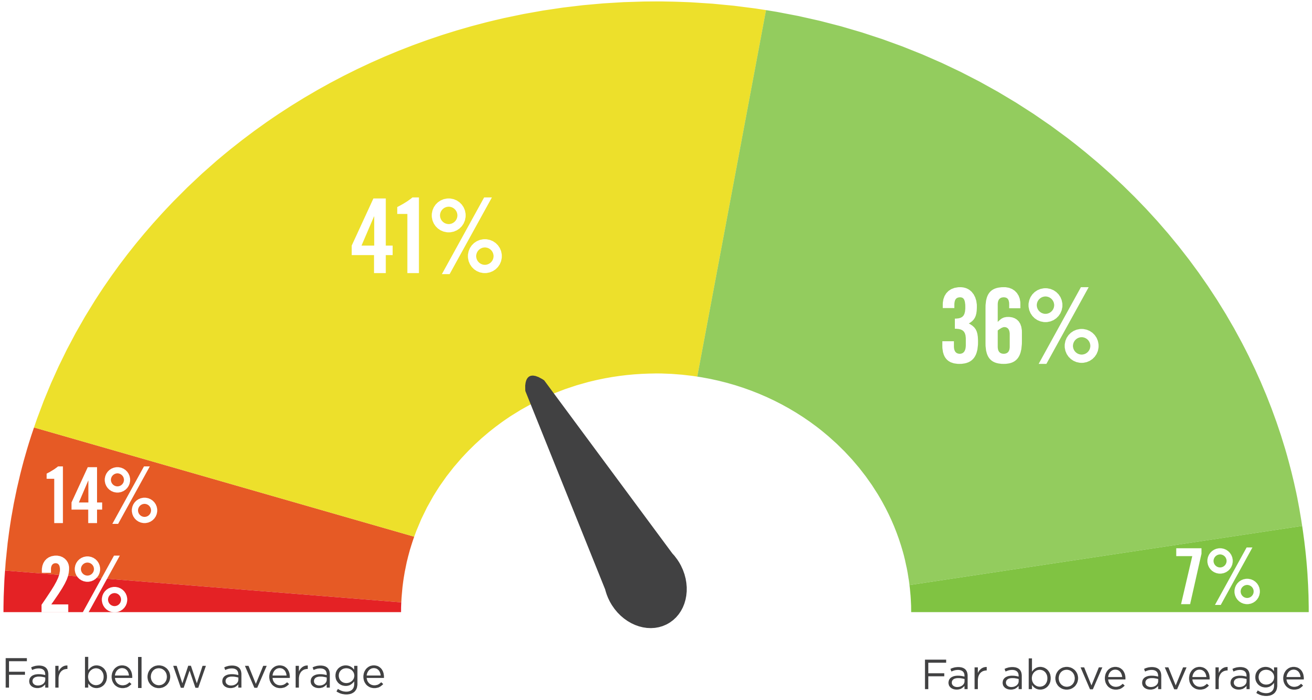


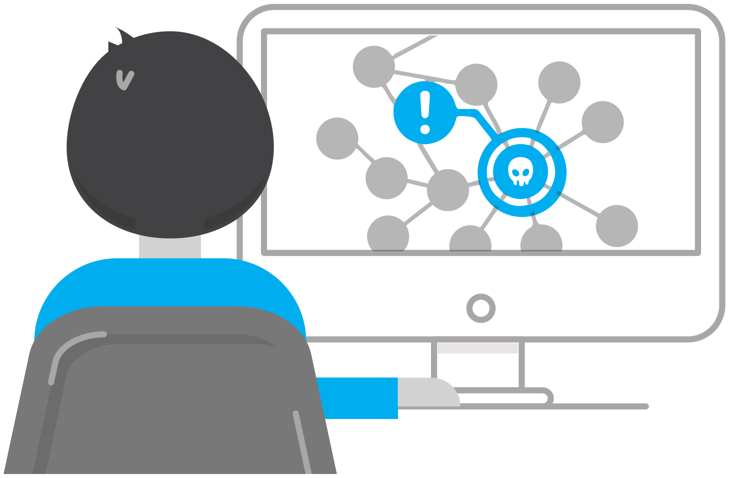
Managing and maintaining multiple sources of threat intelligence

ABILITY TO DETECT THREATS

A majority of respondents (57%) views their ability to detect threats as average or worse. Only 7% consider themselves far above average.

▶ **How do you assess your organization's current ability to DETECT threats?**

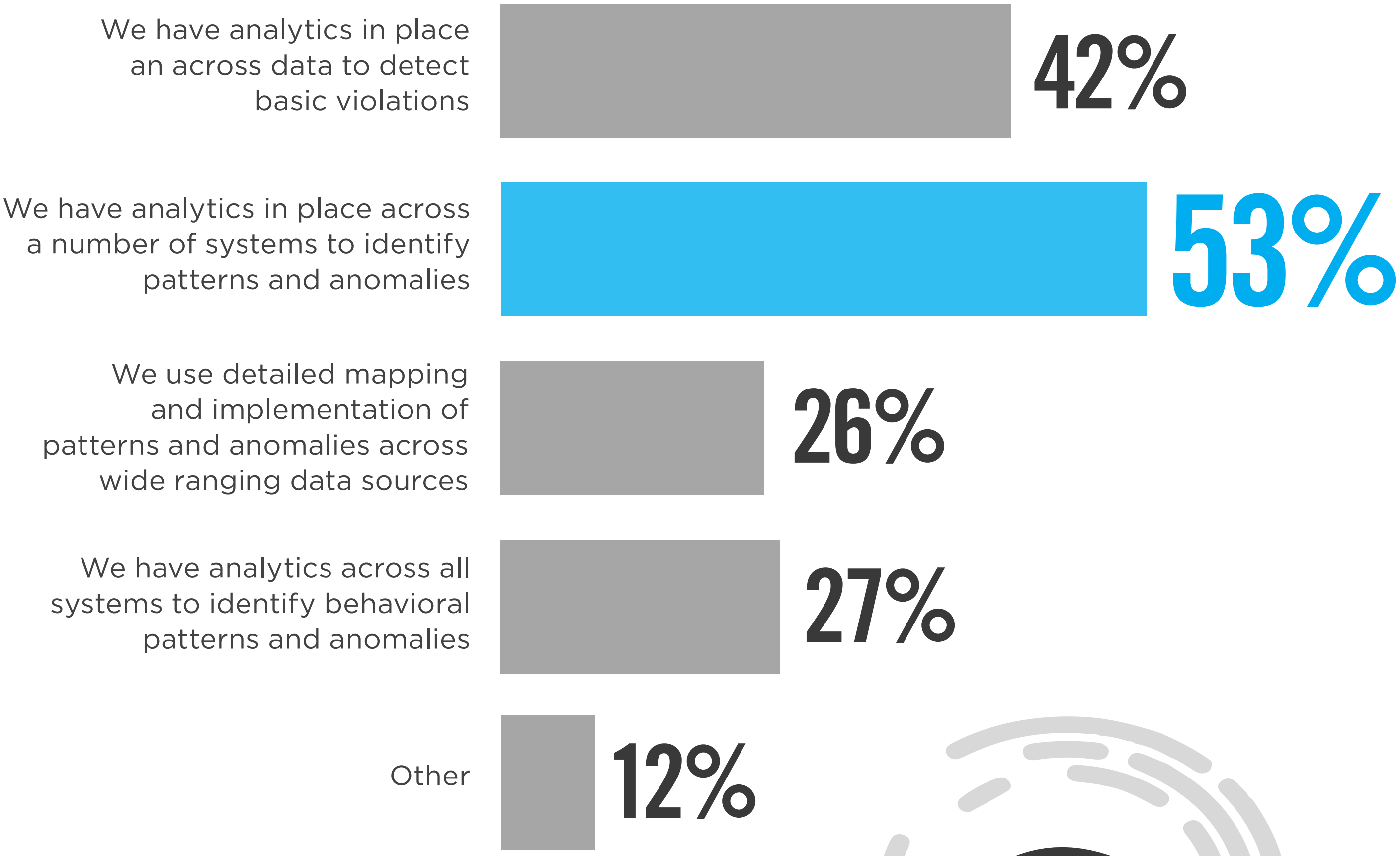




HOLISTIC SECURITY VISIBILITY

Respondents were asked whether their organization has holistic security visibility across its IT infrastructure, and more than half (53%) said they have analytics in place across a number of systems to identify patterns and anomalies. Somewhat fewer (42%) have analytics in place across data to detect basic violations, 26% use detailed mapping and implementation of patterns and anomalies across wide ranging data sources, and 27% have analytics across all systems to identify behavioral patterns and anomalies.

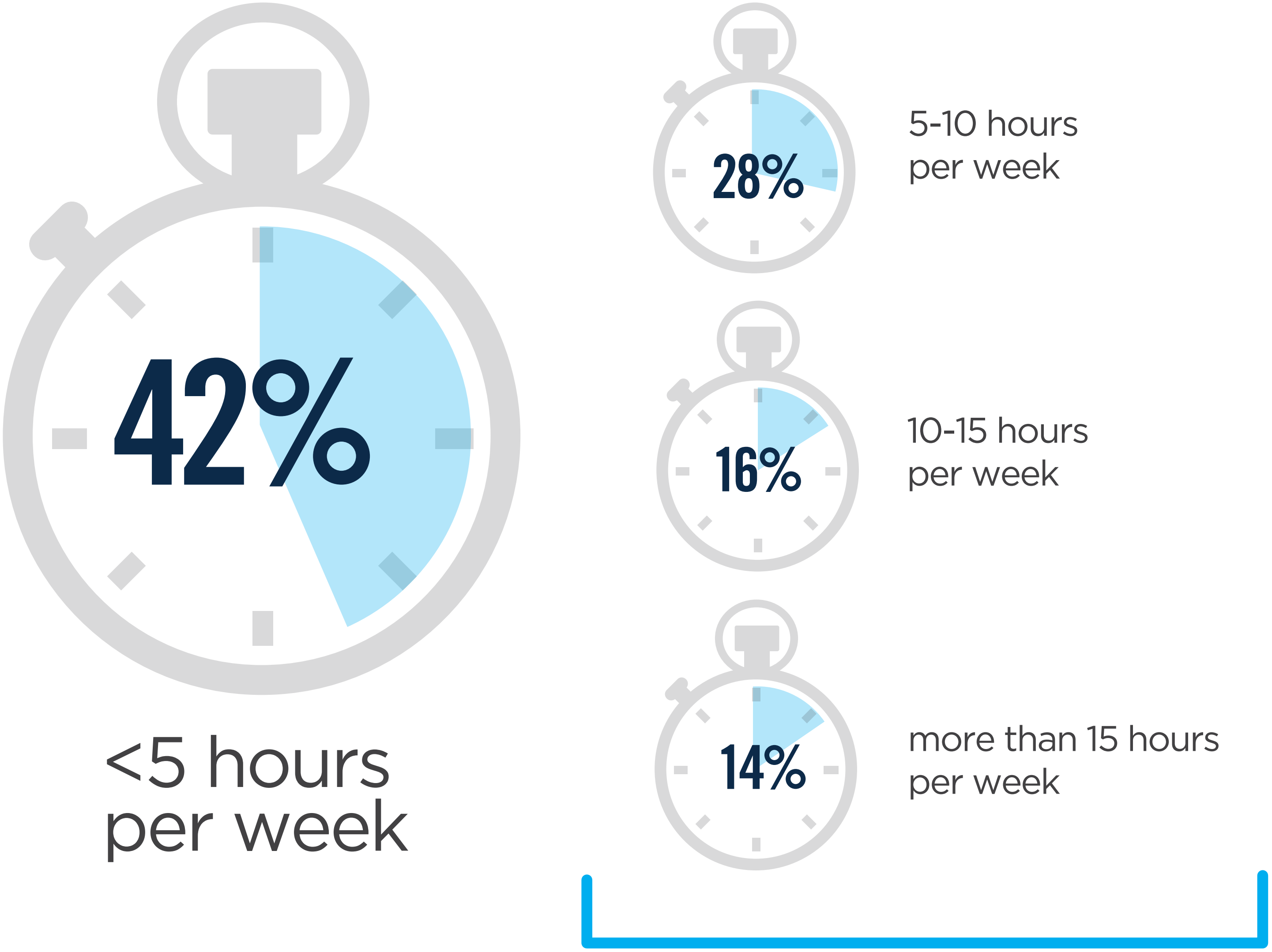
Do you have holistic security visibility across your IT infrastructure?



TIME SPENT RESEARCHING ALERTS

A majority of organizations (58%) spends more than 5 hours a week manually researching alerts from threat intelligence feeds. 30% spend more than twice as much time.

▶ **How much time per week is spent researching alarms from threat intelligence feeds?**

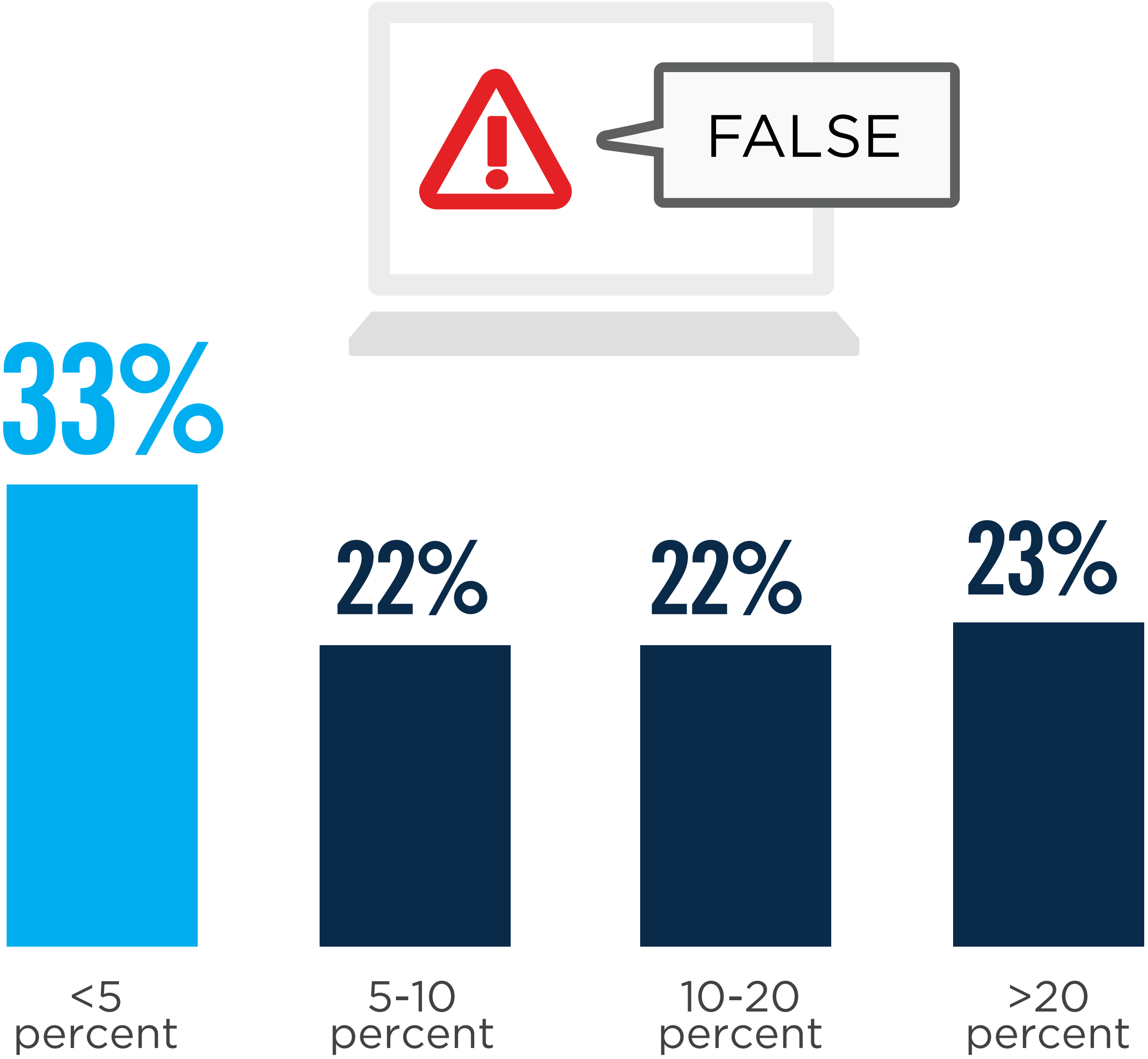


58% spend more than 5 hours a week researching alerts

FALSE POSITIVES

False positives are an ongoing challenge for the cyber security community, and organizations have to deal with this issue when it comes to threat intelligence. About one fifth of the respondents (23%) said greater than 20% of the threat intelligence alarms their organizations receive per week are false positives.

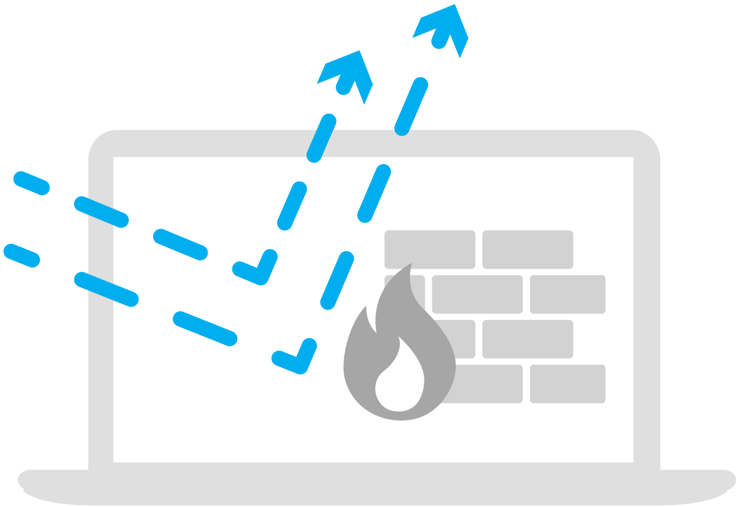
What percentage of threat intelligence alarms on a weekly basis are false positive?

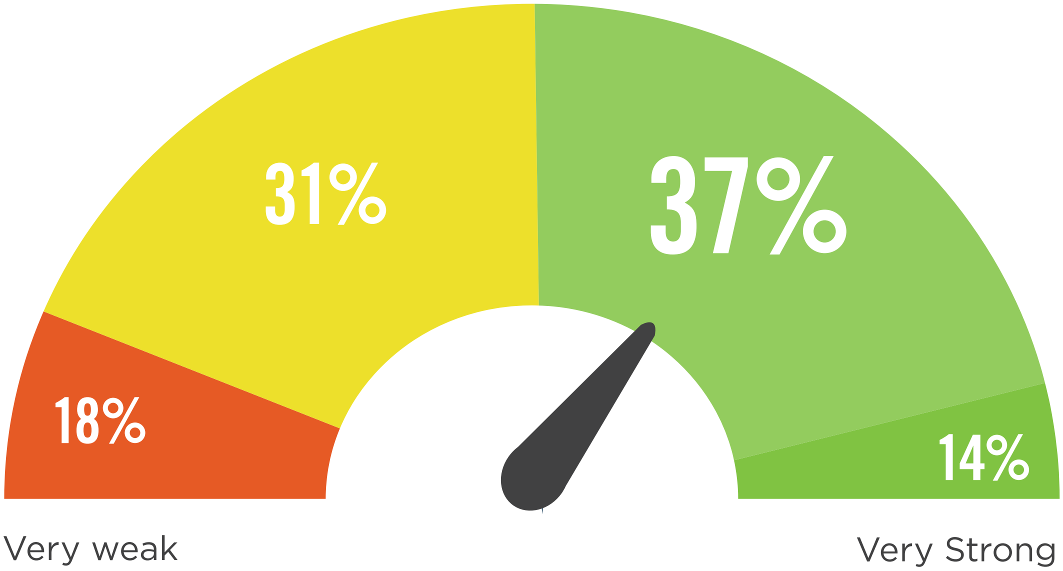


NEXT GENERATION FIREWALLS

Organizations in general have a favorable opinion of next-generation firewalls in terms of their ability to ingest and block threats based on threat intelligence. A majority (82%) said firewalls are at least adequate in this ability, and of those 37% said they are strong and 14% said they're very strong. Only 18% of the respondents said next-generation firewalls are weak when it comes to their ability to ingest and block threats based on threat intelligence.

▶ **How would you describe the capabilities of next generation firewalls in terms of their ability to ingest and block threats based on threat intelligence?**





THREAT INTELLIGENCE TOOLS

Organizations are using an array of tools to aggregate, analyze and present cyber threat intelligence. Just under half (48%) are using security information and event management (SIEM) platforms, which was the most common tool in use. Others are intrusion monitoring platforms (38%), threat intelligence platforms (34%), home-grown management systems (33%), and open source cyber threat intelligence management platforms (30%).

Which of the following tools are you using to aggregate, analyze and present cyber threat intelligence?

SIEM

48%

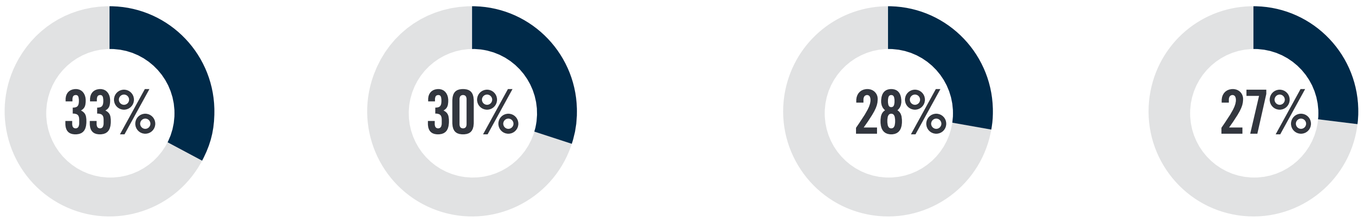
SIEM platform

38%

Intrusion monitoring platform

34%

Threat Intelligence Platform (TIP)



Home-grown management system

Open source cyber threat intelligence management platform (CRITS, MISP)

Commercial cyber threat intelligence management platform

Security analytics platform other than SIEM

Forensics platform 21% | Third-party business intelligence for visualization and reporting 19% | Other 8%

CRITICAL FEATURES

When evaluating threat intelligence platforms, speed and continuous monitoring of threats are high priorities for organizations. When asked to identify the most important features of platforms, more than half of the respondents cited rapid identification and remediation of attacks (56%) and 24x7 threat intelligence, monitoring and analysis (54%). Also important are the ability to assess risk and prioritize threats (41%), integration with other platforms (40%), and management of indicators of compromise (38%).

What are the most important features of a threat intelligence platform?

56%

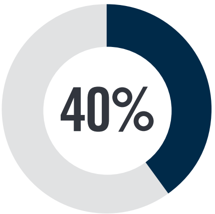
Rapid identification and remediation of attacks

54%

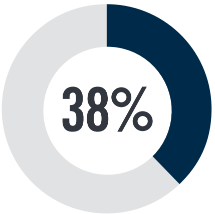
24x7 threat intelligence, monitoring and analysis

41%

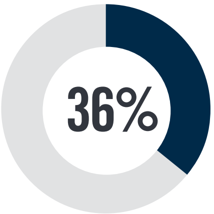
Ability to assess risk and prioritize threats



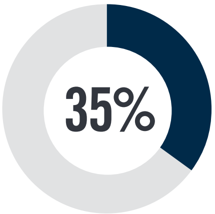
Integration with other platforms (SIEM, NGFW)



Management of indicators of compromise (IOC)



Continuously updated indicators



Threat assessment reports to identify vulnerabilities and risks

Easy incident investigation and threat research 30% | Security policy and controls management 23% | Compliance oriented activities 14% | Other 5%

DATA SOURCES

Organizations are collecting data from a wide variety of systems, services, and applications. Leading the way are vulnerability management tools such as scanners, configuration and patch management, etc., mentioned by 61% of respondents. Other common data sources are network-based firewalls/threat intelligence gateways/intrusion prevention and detection systems (54%), applications including event logs and audit logs (52%), SIEM technologies and systems (50%), and host-based anti-malware software (48%).

What systems, services and applications do you collect data from?

61%

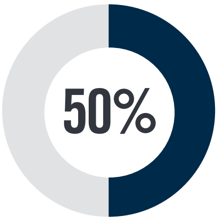
Vulnerability management tools
(scanners, configuration and patch management, etc.)

54%

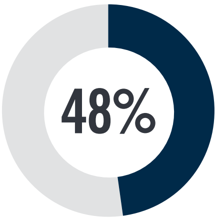
Network-based firewalls/threat intelligence gateways /IPS/IDS/UTM devices

52%

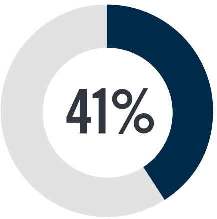
Applications (event logs, audit logs)



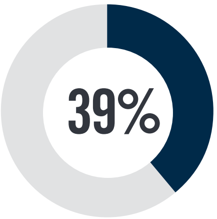
SIEM technologies and systems



Host-based anti-malware



Security intelligence feeds from third-party services



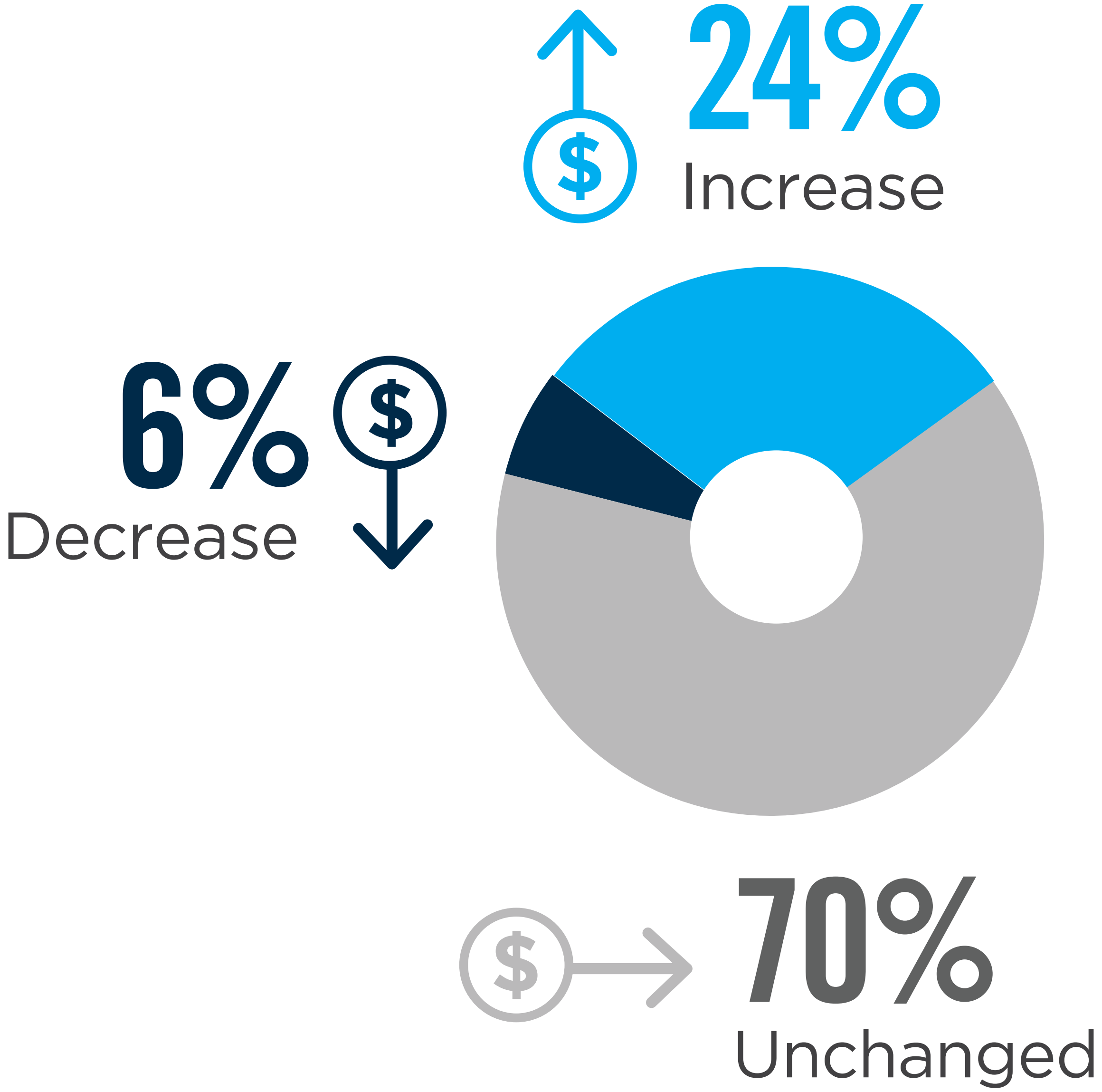
Network packet-based detection

Static Endpoints (PC, NAC, log collectors) 38% | Intelligence from your security vendors 36% | Whois/DNS/Dig and other Internet lookup tools 35% | Network-based malware sandbox platforms 35% | Dedicated log management platform 35% | Host-based IPS/IDS 35% | User behavior monitoring 33% | Mobile Endpoints (mobile devices, MDMs, mobile apps) 30% | ID/IAM (identity and access management) systems 27% | Relational Databases (transactions, event logs, audit logs) 27% | Cloud activity 27% | Netflow 22% | Social media applications (Facebook, Twitter) 19% | Management systems for unstructured data sources (NoSQL, Hadoop) 12% | Other 5%

THREAT INTELLIGENCE BUDGET

For most organizations (70%) there is no expected change in the threat intelligence budget in the next 12 months. About one quarter (24%) expect to see an increase while only 6% expect a decrease.

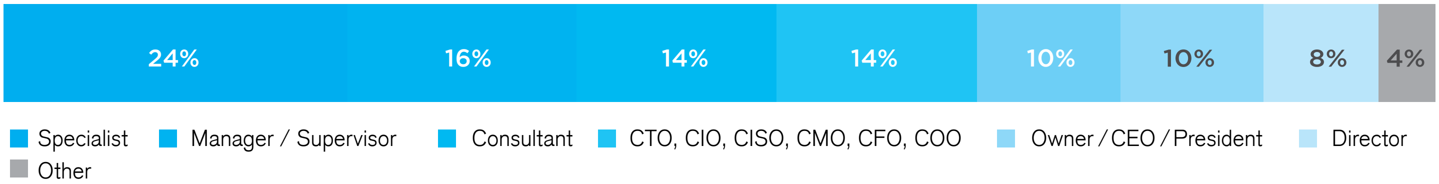
▶ **How is your threat intelligence budget changing in the next 12 months?**



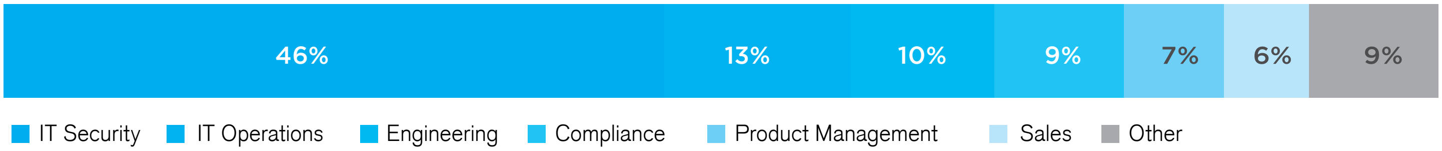
METHODOLOGY & DEMOGRAPHICS

This report is based on the results of a comprehensive online survey of cybersecurity professionals to gain more insight into the latest trends, key challenges and solutions for cyber threat intelligence. The respondents range from technical executives to managers and IT security practitioners, representing a balanced cross-section of organizations of varying sizes across multiple industries.

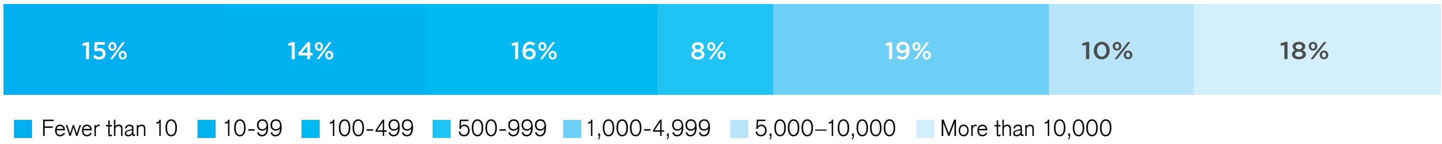
CAREER LEVEL



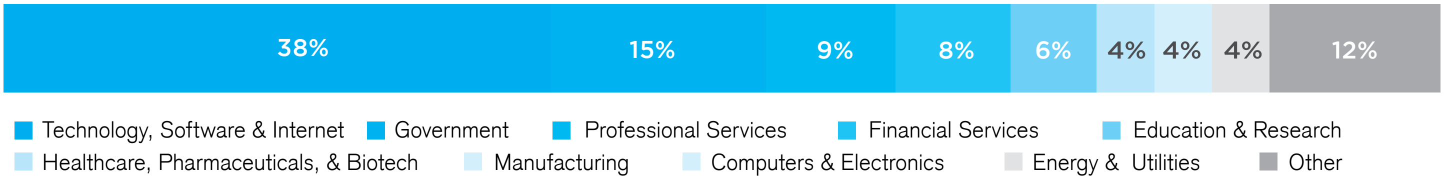
DEPARTMENT



COMPANY SIZE



INDUSTRY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