

10TH ANNUAL

STATE OF THE NETWORK STUDY



BITRATE

EXECUTIVE SUMMARY

The Tenth Annual State of the Network Global Study focuses a lens on the network team's role in security investigations. Results indicate that 88 percent of network teams are now spending time on security issues. In fact, out of 1,035 respondents, nearly 3 out of 4 spend up to 10 hours per week working exclusively on these types of problems - in addition to managing network upgrades, SDN, cloud, and big data initiatives.

When it comes to technology adoption, both cloud and 100 GbE deployment continue to grow aggressively. VoIP adoption is closing in on 60 percent and software-defined networking (SDN) is projected to cross the halfway mark, indicating compounding network complexity amidst the ongoing struggle to ID security threats.

With growth comes change and some trends identified in this year's survey include a rise in email and browser-based malware attacks (63 percent) and an increase in sophistication (52 percent). Nearly 1 in 3 also report a surge in DDoS attacks, signaling a need for potential strategy changes for IT teams.

KEY STATISTICS

TECHNOLOGY ADOPTION

- Since 2015, 40 GbE adoption remains steady at 26 percent
- While 100 GbE adoption jumps from 15 percent to nearly 20 percent in the same time frame
- Nearly half of respondents plan to deploy 100 GbE within 24 months

SECURITY TRENDS

- 88 percent of respondents are now involved in troubleshooting security-related issues
- Of those, 80 percent report an increase in the time they spend on security
- Nearly 3 out of 4 spend up to 10 hours per week on security-related issues

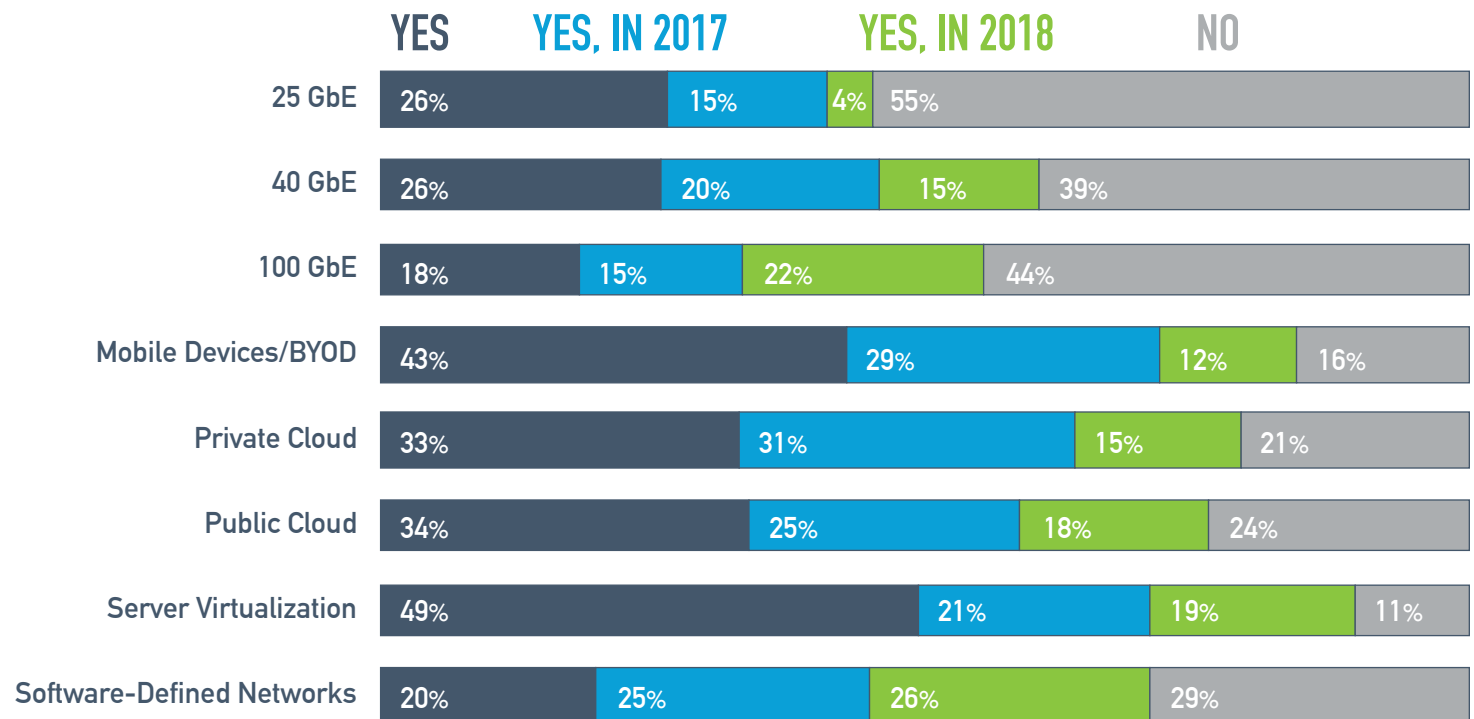
APPLICATION AND NETWORK PERFORMANCE MONITORING

- Over half expect their organization's bandwidth consumption to grow by up to 50 percent in the next 12 months
- Determining whether problems are caused by the network, system, or application was the top challenge overall, cited by 52 percent of respondents
- However, measuring latency and delay issues snagged the top spot for respondents with job title of VP level and above

EMERGING TECHNOLOGIES

Over 50 percent of organizations will have moved to 100 GbE by the end of 2018. Converged environments created by private cloud and SDN implementations are likely fueling much of the need for larger pipes to run between servers. While 40 GbE had been on the uptick, survey results from 2015, compared to today, show a plateau of this technology at 26 percent adoption with 100 GbE now gaining ground.

EMERGING TECHNOLOGY DEPLOYMENTS



HANDLING NETWORK SECURITY

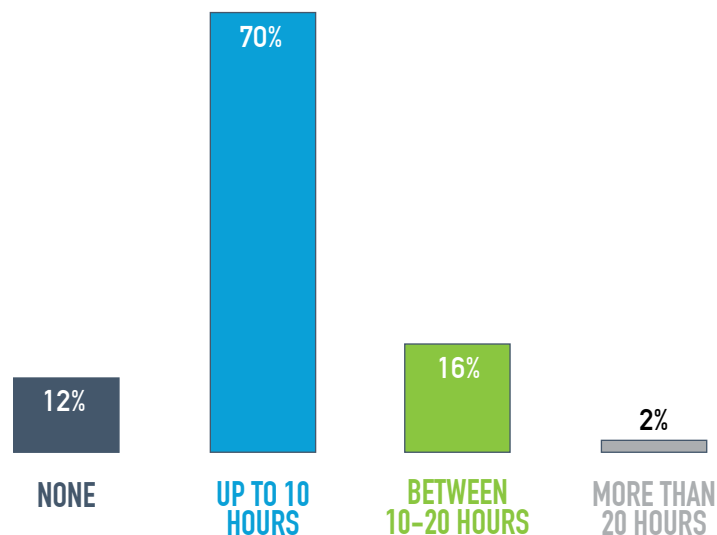
According to a recent Mandiant report¹, it now takes IT teams a median number of 146 days to identify threats on the network. Given the regular media coverage of high-profile breaches, it is not surprising that security teams seek additional resources to augment defenses and investigate attacks.

TIME SPENT ON SECURITY

Not only have more network teams spent time managing security issues but the amount of time has also increased over the past year.

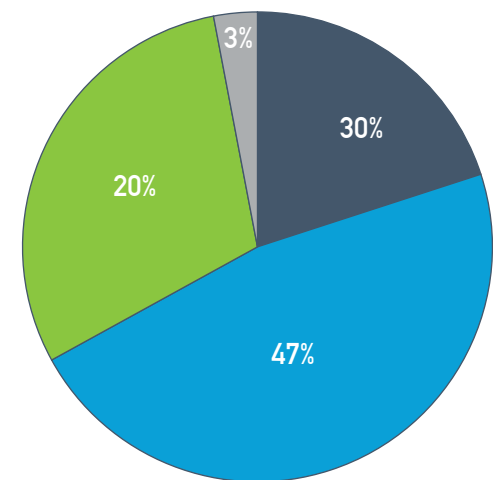
- 88 percent of respondents are now involved in troubleshooting security-related issues, up from 85 percent in 2015
- Of those, 80 percent report an increase in the time they spend on security
- Nearly 3 out of 4 spend up to 10 hours per week on security-related issues

WHAT PERCENT OF A 40-HOUR WORK WEEK DO YOU SPEND TROUBLESHOOTING SECURITY-RELATED ISSUES?



HAS THE TIME YOU SPEND TROUBLESHOOTING SECURITY INCREASED OVER THE PAST 12 MONTHS?

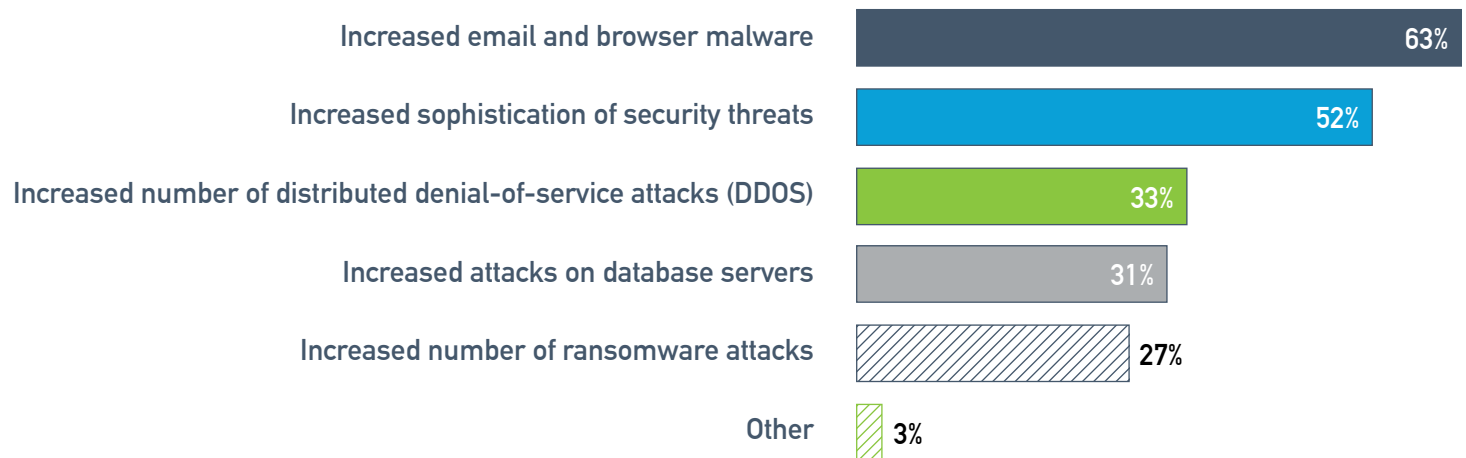
- NO
- YES, BY UP TO 25%
- YES, BY UP TO 26-50%
- YES, BY MORE THAN 50%



NEW THREATS

When asked how the nature of security threats have changed in the past year, IT teams have identified a rise in email and browser-based malware attacks (63 percent) and an increase in threat sophistication (52 percent). Nearly 1 in 3 also report a surge in DDoS attacks.

HOW HAVE THE FOLLOWING NETWORK SECURITY THREATS TO YOUR ORGANIZATION CHANGED IN THE PAST 12 MONTHS?



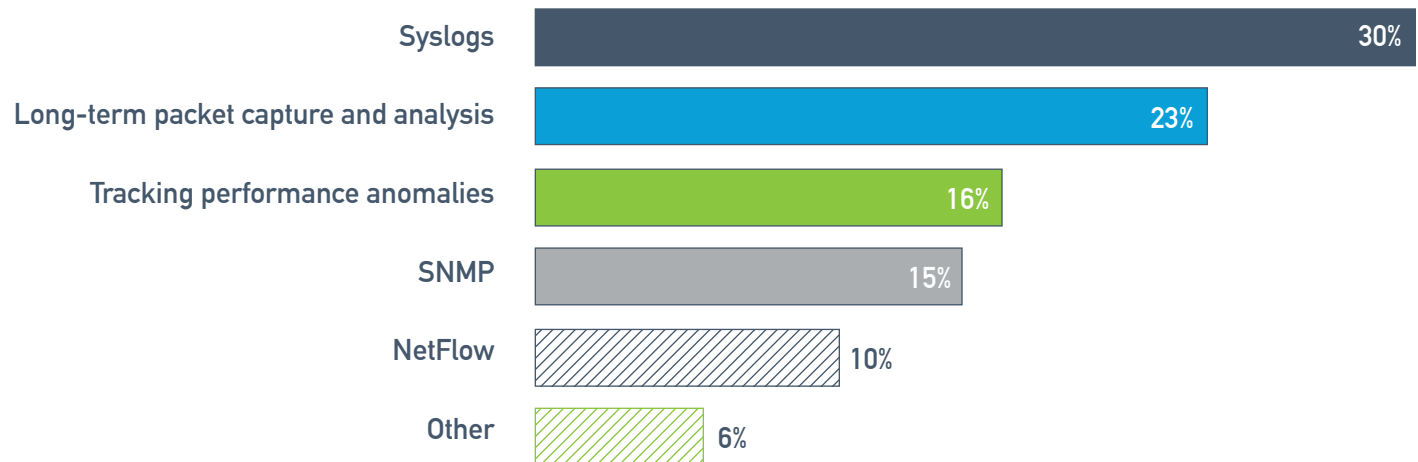
KEY INSIGHT

Network teams are called upon to help with many facets of network security because:

- The network team has visibility into all the traffic, understands what's normal behavior, and can make quick policy changes like blocking specific IP addresses
- Both teams often look at the same anomaly to determine if it's a security or network issue

Syslogs were cited by nearly a third of respondents as the primary method for detecting security issues, followed by long-term packet capture and analysis (23 percent) and performance anomalies (16 percent).

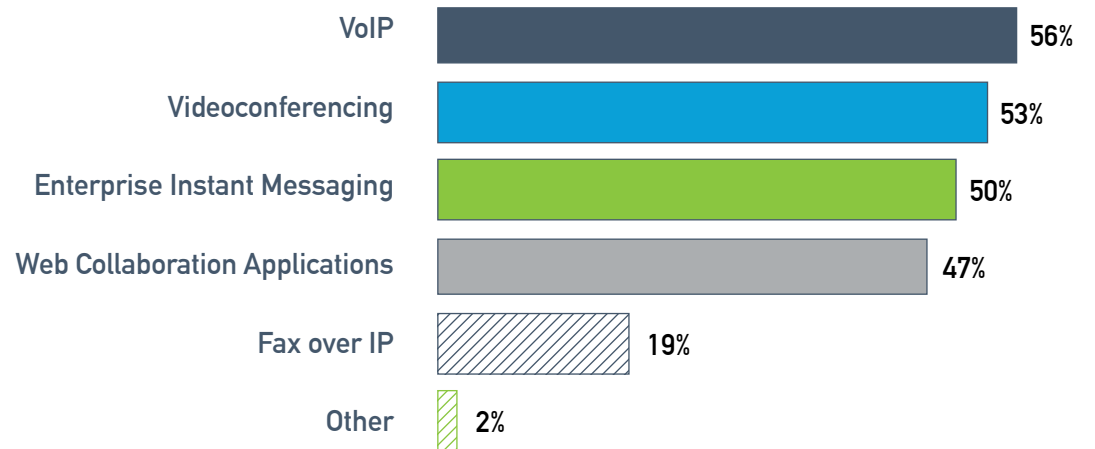
WHAT MONITORING METHODS DOES YOUR NETWORK TEAM USE FOR SECURITY INCIDENTS?



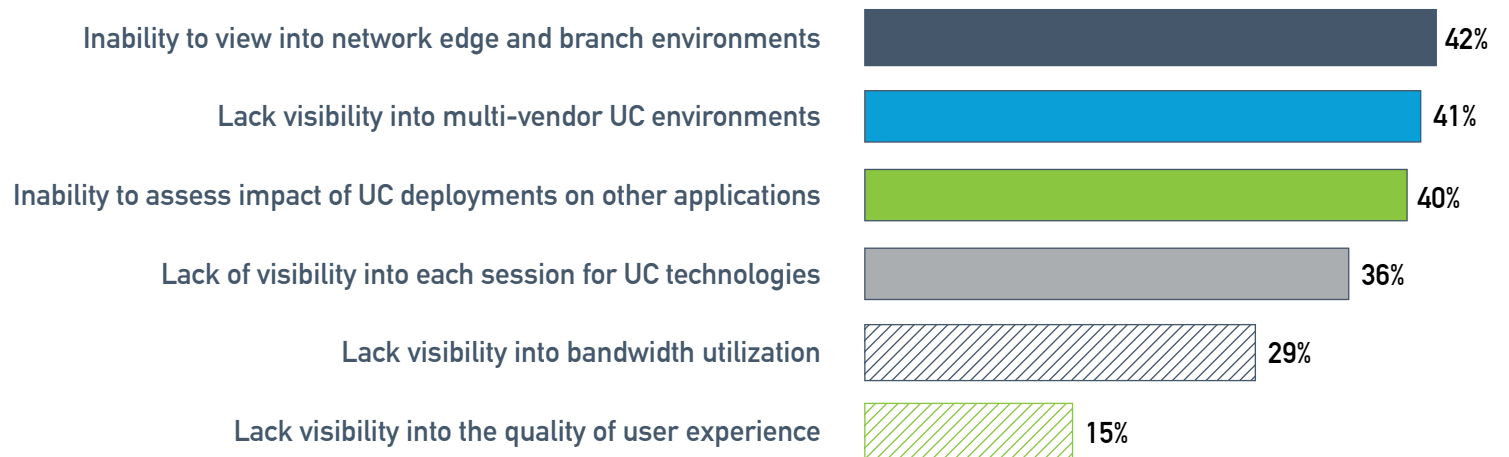
UC ADOPTION AND CHALLENGES

Though hardly an emerging technology with over 50 percent adoption, VoIP, and unified communications (UC) in general remains a challenge when it comes to ensuring performance and optimal end-user experience.

WHAT UC APPLICATIONS HAS YOUR ORGANIZATION DEPLOYED? (check all that apply)



WHAT ARE THE KEY CHALLENGES YOU FACE IN MANAGING UC PERFORMANCE OVER THE NETWORK? (check all that apply)



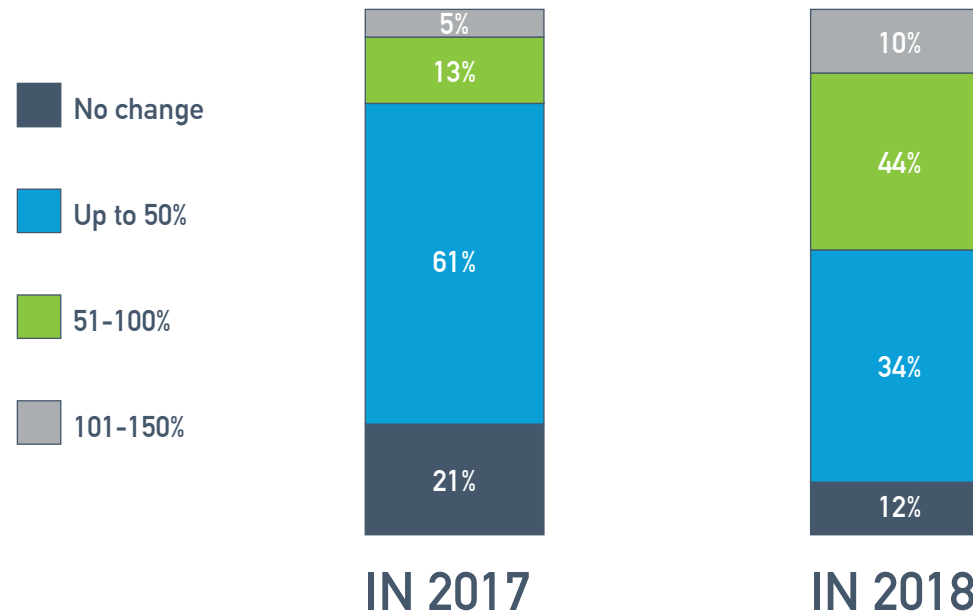
APPLICATION AND NETWORK PERFORMANCE MONITORING

Projected bandwidth growth is a clear factor driving the rollout of larger network capacities. The most significant takeaway is that nearly 2 out of 3 expect bandwidth demand for their organizations to grow by up to 50 percent in 2017.

INCREASED BANDWIDTH DEMAND

According to respondents, more than half predicted that their bandwidth usage could double by the end of 2018, nearly 20 percent by 2017.

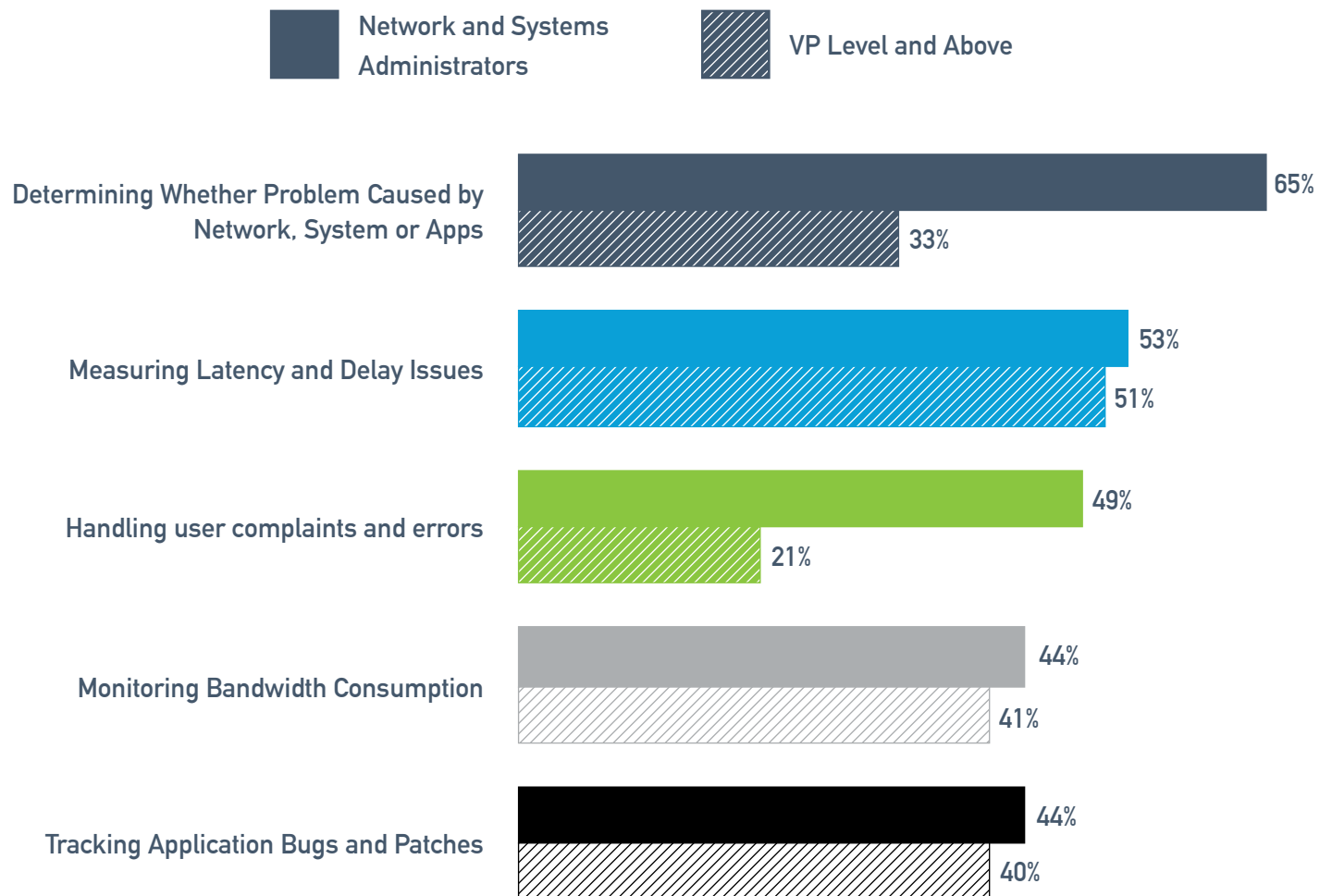
HOW MUCH DO YOU EXPECT THE BANDWIDTH DEMAND FOR YOUR ORGANIZATION'S NETWORK TO GROW FROM ITS CURRENT LEVELS?



CHALLENGES BY TITLE

Top application monitoring challenges differed by job title with VP-level and above pointing to measuring latency and delay issues as their number one challenge, versus nearly 2 out of 3 network and systems administrators indicating that determining whether problems are caused by the network, system, or applications is the top challenge.

WHAT ARE YOUR MOST COMMON PROBLEMS WHEN TROUBLESHOOTING APPLICATIONS? (check all that apply)



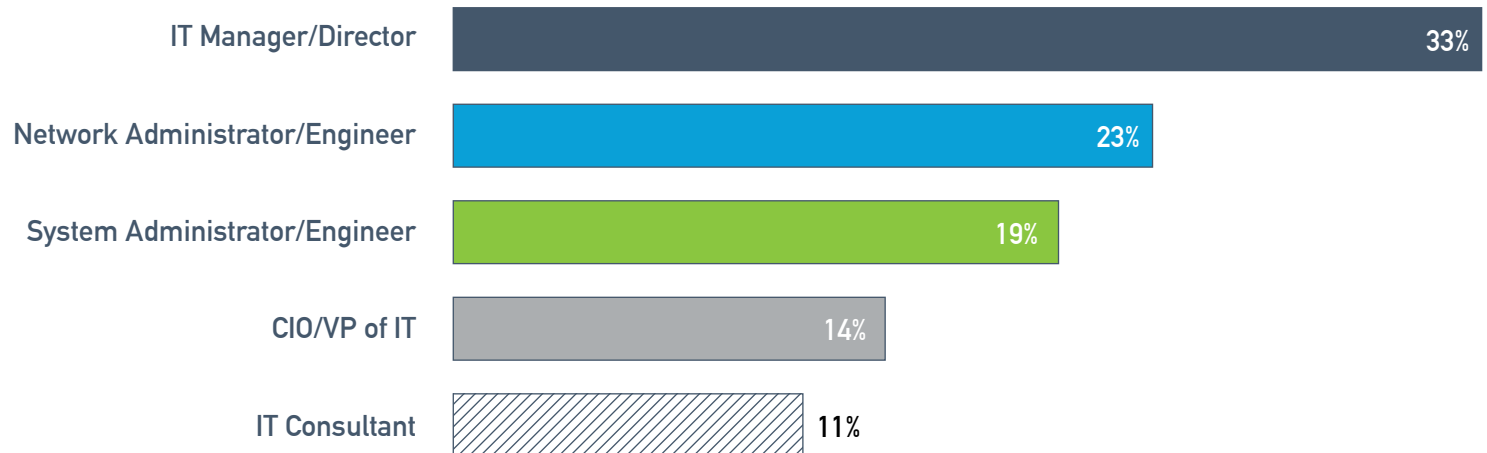
RESEARCH AND METHODOLOGY

Study questions were designed based upon interviews with network professionals and IT analysts. Results were compiled from the insights of 1,035 respondents, including network engineers, IT directors, and CIOs from around the world.

WHERE ARE YOU LOCATED?



WHAT IS YOUR PRIMARY JOB FUNCTION?



For more information about the study's methodology or the results, contact Stephen Brown at steve.brown@viavisolutions.com.



STATE
OF THE **NETWORK**

The logo features a circular graphic composed of several colored segments (green, blue, yellow, red) arranged in a ring. The year '2017' is centered within the ring.

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