Malware bytes

Enduring from home

COVID-19's impact on business security

Contents

- 1 | Executive summary
- 2 | Key takeaways
- 3 | How prepared were companies transitioning to WFH?
- 4 | Which WFH challenges were respondents most worried about?
- 5 | What actually happened: the bad news
- 6 | What actually happened: the good news
- 7 | Meanwhile, what's happening in cybercrime?
- 8 | Analyzing confidence and potential security hubris
- 9 | Next steps for employers
- 10 | Conclusion

1 | Executive summary

In March, for companies across the United States, "business as usual" became business uncharted, as the novel coronavirus spread throughout the nation at an unchecked pace.

Faced with shelter-in-place orders in their home counties and states, countless companies transitioned to entirely remote workforces.

Predictably, these near-immediate transitions carried with them some setbacks. A remote workforce can become a workforce stretched thin: Communication must adapt to online models of email, chat messaging, and video conferencing; collaboration must move to cloud-based storage platforms; and keeping business afloat must take into account the unique cybersecurity needs of now-remote workers who are connecting to potentially unsecured home networks while accessing company resources from personal devices—all without the direct support found within the office.

It's enough to scare any IT director.

Keeping business afloat must take into account the unique cybersecurity needs of now-remote workers who are connecting to potentially unsecured home networks while accessing company resources from personal devices.



Methodology

At Malwarebytes, we wanted to dig deeper into today's new, work-from-home (WFH) normal, measuring not just the immediate reaction to the pandemic, but also businesses' planned cybersecurity strategy for the future.

ណ៍

We surveyed more than 200 managers, directors, and C-suite executives in IT and cybersecurity roles at companies across the US.

We surveyed more than 200 managers, directors, and C-suite executives in IT and cybersecurity roles at companies across the US. These roles include IT Manager, IT Director, and IT Executive/C-Suite, along with IT/Cybersecurity Manager, IT/ Cybersecurity Director, and IT/Cybersecurity Executive/C-Suite. Our respondents covered the gamut of company sizes, with some working at small- and medium-sized businesses and others at large enterprise organizations. We grouped participants into the following company sizes: 100 – 349 employees; 350 – 699 employees; 700 – 1,249 employees; 1,250 – 4,999 employees; and 5,000 employees and over. Our survey of roughly one dozen questions tracked respondents' concerns about transitioning to WFH, the impacts suffered due to the pandemic, and their plans to implement long-term security changes moving ahead.



2 | Key takeaways

Our research revealed some concerning trends. We found more devices spread across more locations connecting to more software tools, coupled with an uneven increase in deploying antivirus software. These actions have predictably resulted in serious setbacks for some companies.



Said they paid unexpected expenses specifically to address a cybersecurity breach or malware attack following shelter-inplace orders.



Said they faced a security breach as a result of a remote worker.



Admitted that, for their employees, cybersecurity was not a priority, while 5 percent admitted their employees were a security risk and oblivious to security best practices.



Admitted they're using personal devices for workrelated activities more than their work-issued devices, which could create new opportunities for cyberattacks.

Our survey also found that, despite some of the above setbacks, a majority of respondents scored their organizations rather high when evaluating their readiness to transition to WFH. This may be an example of an often difficult-to-measure phenomenon that we call "security hubris," aka overconfidence in limited security measures deployed. For example:



Scored their organizations a 7/10+ when determining their readiness for transitioning to WFH

Did not provide cybersecurity training that focused on potential threats of working from home (like ensuring home networks had strong passwords, or devices were not left in the reach of non-authorized users)

Did not perform security and online privacy analyses of software tools deemed necessary in transitioning to WFH

Provided work-issued devices to employees as needed

Did not deploy a new antivirus solution for those same devices

Did not urge employees to use antivirus on their personal devices

Amidst the cybersecurity vulnerabilities, companies were also hit by several financial losses caused by the pandemic itself. At least a quarter of respondents said their organizations froze all or nearly all promotions and pay raises, laid off employees, or lost clients or contracts.

Amongst the worrying trends, however, we found a silver lining.

While some of the numbers above may present the picture of an insecure, vulnerable workforce, there is a flipside to the data. For example, while nearly half of our respondents may not have provided cybersecurity training to their employees, the other half did. The same is true for the 55 percent of respondents that performed security and online privacy analyses of software tools.

These trends are not only encouraging, they may soon become necessary. The fact is that the transition to WFH has not happened in a vacuum. Staying cyber secure is not just an exercise in good company governance. Mercilessly, in the midst of all this, threat actors have pounced. Malwarebytes' internal telemetry showed that, following the issuance of multiple shelter-in-place orders this year in various states across the US, several malware threats shot up in popularity. Like we said then, we have no strong evidence that any of these threats will fade back into obscurity any time soon.

So, it's up to companies and their employees to start planning for the future today. With our full report, you'll see which steps are effective, and what you and your organization can do today to best support your remote workforce to endure tomorrow. In the midst of all this, threat actors have pounced...following the issuance of multiple shelter-in-place orders this year in various states across the US, several malware threats shot up in popularity.



3 How prepared were companies transitioning to WFH?

COVID-19 caught every company, large or small, off-guard. Organizations' security budgets may have increased year-over-year and their defensive measures may have become more proactive—but few survey participants could admit they were fully prepared for an immediate transition to work-from-home en masse.

Less than 16 percent of survey participants gave their organization a perfect score on WFH readiness. Still, a significant percentage of respondents expressed high levels of confidence in how prepared their company was for the move to remote work.

To understand the volume of work IT teams would need to tackle in the transition to WFH, we asked survey participants to tell us the percentage of employees that were moved to a WFH model. About onethird of respondents (33.2 percent) moved 81–100 percent—if not all—of their employees home. And 142 respondents, or a little more than 70 percent, moved 61 percent or more of their workforce to a WFH model.

For companies with fewer than 700 employees, 42.9 percent moved 61-80 percent of their workforce home. On the other hand, for companies with 700 employees or more, 37.9 percent moved 81-100 percent of their workforce home . Among our respondents from the four major regions of the United States—the Northeast, South, Midwest, and West—organizations from the South moved more employees to WFH (33.2 percent) than any other region. The Northeast trails behind in a distant second (21.3 percent), with the West following closely on its heels at 20.3 percent.

IIII → 🏠 î



moved **81-100%** of their employees home.



moved **61%+** of their workforce to a WFH model



of Companies with **100–700** employees moved **61-80%** of their workforce home



of companies with 700+ employees moved 81-100% of their employees home.





Ranking WFH preparedness

To measure participants' confidence in their WFH readiness, we asked managers, directors, and executives across business sizes, US regions, and industries to rate how prepared their organization was to transition to working from home on a scale from 1–10, with 1 representing the least prepared and 10 representing the most. Of the 202 respondents, the average ranking was 7.23. In fact, roughly three quarters (73.2 percent) of those we surveyed gave their organizations a score of 7 or above on preparedness for the transition to WFH. On the flip side, only 14 percent scored their company a 4 out of 10 or less.



Among IT leaders surveyed, directors of companies with more than 5,000 employees were the most confident group when rating their company's cybersecurity posture, giving it an average of 8.2 out of 10. In fact, following close behind were directors from organizations with 350–699 employees, with an average of 8.16. However, the pattern stops there, as not all directors felt as confident about their WFH preparedness.

In contrast, directors and those in executive/C-suite positions of companies with 700–1,249 employees were the least confident, giving their organizations an average rating of 6.11 and 6.5 out of 10, respectively. Managers belonging to these companies, however, did not share this view. Their ratings bucked the trend hard, with an average of 8 out of 10.



Regional preparedness

When we sliced our data according to the four major regions of the United States—the Northeast, Midwest, South, and West—we saw that confidence in WFH preparedness was generally higher in the Northeast and South than it was in the Midwest and West. Regional ratings didn't stray far from participants' overall average, with scores falling into a narrow band between 6.9 and 7.3. Companies in the Northeast, however, were the most confident about their cybersecurity posture, boasting an average of 7.33 out of 10. The Midwest was least sure about its WFH preparedness, ranking its organizations at a 6.91.



⊘alwarebytes



4 Which WFH challenges were respondents most worried about?

The shift from working in the office to working from home did not erase cybersecurity problems that were already there, pre-COVID. If anything, organizations were presented with new, compounding challenges that had to be addressed without delay.

Companies that were able to successfully transition to WFH did not do so free from problems: More than half of IT leaders surveyed reported facing at least three of the challenges listed in our questionnaire. The challenge cited most by respondents was training employees on how to be security compliant at home (55.4 percent), followed by setting up work or personal devices with necessary software (53.5 percent). Fifty-one percent of participants felt shifting to a new, remote model of communication was a challenge as well. The challenge selected by the fewest respondents was ensuring work/life balance at 36.6 percent.

Organizations' biggest challenges to WFH



A 62



Employee cybersecurity awareness

Despite finding training employees on security compliance to be a challenge, 47 percent of respondents were confident that their employees were "very aware" of the cybersecurity best practices they needed to follow at home. A much smaller portion (17.3 percent) believed their employees were "acutely aware and mindful to avoid risk." Only 5.4 percent of IT leaders said their employees were "oblivious and risky."



Employee awareness of cybersecurity best practices when WFH

Most respondents expressed faith in their employees' awareness of cybersecurity best practices.

Respondents in director and executive positions expressed more confidence than managers in their employees' awareness of cybersecurity procedures while working remotely. While 20.5 percent of executives said their staff was "acutely aware," just 16.2 percent of managers felt the same. Conversely, only 1.7 percent of directors stated their employees were "oblivious and risky" compared to 7.6 percent of managers.

How aware are your employees about cybersecurity best practices while WFH?

Managers, directors, and executives expressed similar levels of faith in their employees, though directors and executives felt slightly more confident.





Biggest cybersecurity concerns

What are your biggest cybersecurity concerns with remote work?



When asked about their biggest cybersecurity concerns now that all or a portion of their employees are working remotely, it is clear that managers, directors, and executives are most concerned about other individuals in the home who have access to an employee's device and might inadvertently compromise it (45 percent).

Although these organizations have successfully moved their employees to WFH, some cybersecurity concerns persist.

Other concerns that stood out are difficulties associated with managing devices using remote work resources (37.6 percent), the possibility of IT not being able to support employees efficiently (37.1 percent), and the general lack of adequate cybersecurity measures over resources, including cloud collaboration tools (36.1 percent) and personal networks and devices (36.6 percent).



13

5 What actually happened: the bad news

Respondents' concerns were largely founded in reality. As we learned from our survey, some of the same fears expressed by IT leaders later materialized in the transition to WFH.

Our survey found that 23.8 percent of the respondents ran into unexpected expenses specifically to address a cybersecurity breach or malware attack. And nearly 20 percent (19.8 percent) stated they faced a security breach because of a remote worker.

Respondents said they also suffered from cyberattacks and security breaches as a direct result of shelter-in-place.



Paid unexpected expenses specifically to address a cybersecurity breach or malware attack



Faced a security breach as a result of a remote worker

Let's briefly put that 19.8 percent statistic into perspective. Remember that all it takes for a company to suffer a security breach as a result of a remote workforce is to compromise just one remote employee. As our survey showed, a remarkable 98 percent of respondents said their organizations have moved

at least 21 percent of their employees into remote positions. Further, the remaining 2 percent of respondents said their organizations moved anywhere from 0 to 20 percent of their workforces into remote positions. With these numbers, it's safe to assume that



nearly every company out there today has at least one remote employee, and thus is vulnerable to this type of threat.

Further, it is important to point out two significant contributing factors that impact cybersecurity for remote workers. One: Workers that suddenly transitioned to remote work found themselves working from a different environment, outside of the company's security perimeter. Two: Some of the employees had to work on different, unfamiliar devices. Both of these factors contribute to a weakened security posture overall.



What negative financial impacts has your organization experienced following the shelter-in-place oders?

Respondents said they suffered a variety of financial impacts due to shelter-in-place, which directly impacted revenue.

In fact, 31.2 percent of our respondents admitted they sometimes used personal devices for work and a frightening 27.7 percent said they used their personal devices more than the device provided by their workplace. Worse: 8.4 percent never even received a work-issued device for remote usage. Only 39.1 percent adhered to a strict regime of only using work-issued devices for the workload.

As we know, though, the effects of WFH and of the coronavirus pandemic extend beyond cybersecurity impacts. Companies have also suffered broad financial losses.

Effects of the COVID-19 pandemic on organizations



Hiring freeze

Layoffs

Over half **(55%)** of the respondents said they froze all hiring or only made a few exceptions for critical positions. This makes sense. With the short-term future of an organization in limbo, you do not want to make long-term commitments—except when the position is critical to your organization's success.

Almost one third (30.7%) stated

they had to let people go, which

is an unfortunate consequence

of respondents (24.8 percent)

lost clients or contracts.

of lost business; almost a quarter



No promotions/raises

Over a third **(37.6 percent)** of our respondents held off on promotions and pay raises, which is a logical consequence of short-term insecurity. If the company comes out of the crisis unhurt, it is easy enough to make raises retroactively effective.



5K+ organizations

Organizations of 5,000 employees or more were most likely to suffer from nearly all of the above—layoffs, hiring freezes, promotion freezes, and restrictions on travel—with **32.4%** reporting layoffs, **56.8%** reporting hiring freezes, **54%** reporting promotion freezes, and **54%** reporting travel restrictions.

These numbers show that, for the rest of 2020, several companies may be operating in a crouched, careful position, with fewer resources and fewer dollars to rely on. While that may imply that the actual workforces powering these companies will similarly suffer, the data, strangely, showed the opposite.

For the actual work—or productivity—taking place during the pandemic, little effect was found.



Travel restrictions

Almost half **(48%)** restricted travel expenses, which was not hard not to do with international travel banned to and from large parts of the world.



350-699 organizations

Organizations of 350–699 employees were least likely to lose contracts or clients, with only 13.5 percent of respondents saying they suffered from such a financial impact. Organizations of 5,000 employees or more were also fairly well protected, with just 21.6 percent having lost a contract or client.



100-349 organizations

Organizations of 100–349 employees reported better resilience from travel restrictions and layoffs, with **36.4%** reporting travel restrictions and **24.2%** reporting layoffs—the smallest share of any size business.

Productivity

Many companies have learned that it is cheaper to have some or all of their people work from home. But how did it impact productivity? Looking at the survey results, having a fully remote workforce did not appear to have negatively impacted employee productivity. While a select few (2.5 percent) of the respondents indicated they suffered with significantly lower productivity, a lot more (19.8 percent) answered with a significant improvement in productivity. The rest only noticed slight or no difference at all. The difference between productivity seems to be related to industry and team structure. In some fields, teams that were no longer in the same room were at a disadvantage. However, many companies gathered enough practical information about their people and teams to enable them to work from home for extended periods of time—even if/ when the pandemic subsides.

Thankfully, these maintained levels of productivity are not the only good news we found. Looking at the survey results, having a fully remote workforce did not appear to have negatively impacted employee productivity.

6 | What actually happened: the good news

The COVID-19 threat built slowly and hit hard, taking many by surprise when lockdown arrived and forcing businesses to evaluate at short notice how they'd be able to function as remote organizations.

As it happens, several businesses were more prepared than they might have initially suspected with swift, decisive responses from the largest organizations to the smallest. Sixtyone percent of respondents were able to supply staff with devices to work remotely, and 56.4 percent provided crucial training to ensure best cybersecurity practices were followed in a home environment.

In the blizzard of suggested installs and unfamiliar programs recommended for WFH, caution came into play as organizations resisted the panic-stricken kitchen sink approach; 21.3 percent told us they refrained from deploying software because it didn't meet their standard for security. On a related note, 55 percent performed security and privacy analysis of any software suggested for their network prior to deployment. And 38.6 percent also said they'd urged employees to install antivirus tools on their personal phones while working from home.

Admittedly, these aren't the highest numbers, and, predictably, as a cybersecurity organization, we'd like to see higher rates of cybersecurity training and adoption of antivirus tools. But, that said, these numbers show that some companies are taking the right steps. 61%

Sixty-one percent of respondents were able to supply staff with devices to work remotely, and 56.4 percent provided crucial training to ensure best cybersecurity practices were followed in a home environment.

An increase in remote tools usage

Naturally, after transitioning to a remote workforce, 57 percent of respondents said their usage of remote tools such as Zoom. Microsoft Teams, and Google Hangouts to communicate across the organization had increased significantly. We found similar boosts for instant communication/ messaging tools like Slack (34.7 percent), cloud storage solutions to manage data securely (33.2 percent), and VPN services to keep communications locked down (26.7 percent). There were also gains for password managers, with 30.2 percent claiming they used them slightly more than they used to and 19.8 percent using them significantly more.

While some of these numbers may sound low, it's worth noting that any increase in key areas of business security is a good thing—even in cases where businesses said their use had slightly increased. For example, 37.1 percent of respondents confirmed this small rise for VPN usage, with 40.6 percent replying in kind for tools such as Slack. For some tools and services, there wasn't much difference between how respondents were using them after lockdown vs. before. In fact, both cloud storage and cloud access were used with the same frequency, with no visible increase.

Identity management (such as OneLogin, Okta) was particularly unique in that precisely 36.1 percent said they used these tools the same as before, and another 36.1 percent said they used them a little bit more than they did pre-pandemic.

All this data suggests work environments that were already secure and making good use of security and privacy tools had a reasonably smooth transition to WFH, even if the organization wasn't previously aware it was possible. More successful and well-thought out security policies and practices didn't ultimately need a huge amount of change to become COVID-19 resilient.



Naturally, after transitioning to a remote workforce, 57 percent of respondents said their usage of remote tools such as Zoom, Microsoft Teams, and Google Hangouts to communicate across the organization had increased significantly.





7 | Meanwhile, what's happening in cybercrime?

Despite rolling with the punches and expressing relative confidence in their ability to transition to remote workforces, IT leaders must still contend with relative instability in the economy and in the cybersecurity space as a whole.

We are currently in a period of great chaos for employees, employers, and cybercriminals alike. We know this because threat actors have been scrambling to adjust to the sudden change just as much as organizations.

Instead of taking time to develop sophisticated malware families that would ultimately do a better, stealthier job of investigating new security setups in the wake of COVID-19, cybercriminals have had to resort to using commercially available (and sometimes older) malware families just to get a look inside the networks and access points of fully remote teams—a reactive instead of proactive move. Since they didn't have time to develop new malicious code, threat actors had to deploy what they had on hand once COVID-19 sent everyone home. Lucky for them, they had a few tricks up their sleeves.



Since they didn't have time to develop new malicious code, threat actors had to deploy what they had on hand once COVID-19 sent everyone home.



How cybercriminals are adjusting to COVID-19

While cybercriminals had previously ramped up attacks on organizations and dialed down their advances on consumers over the last two years, they had to quickly adjust to a hybrid approach, targeting personal and work systems in order to smoke out atrisk employees and vulnerable remote networks. Cybercriminals expected employees to have access to corporate VPNs, cloud-based services, and business email, all of which could be used for infiltration of corporate assets if not properly secured. In addition, we've seen many campaigns using the fear of COVID-19 as the theme for their malicious activities.

The following are real examples of malicious emails using the novel coronavirus to trick users into opening attached files.

RE: Disposable Face Mask and Forehead Thermometer Fullian Joy Solar Technology Corporation <geral@fcristino.com> To undisclosed-recipients: IMG_0585032857.zip A4 KB Dear, Nice day! This is Bella Huang from Fujian Joy Solar Technology Corporation. Currently, the Coronavirus has spread all over the world. Attached are the item images In order to fight against the epidemic, our compan established two production lines for disposable face mask and forehead thermory Now we have started mass production but demand exceeds supply. Kindly contact us if interested. Thanks and best regards, FRADAH MOHAMED Customer Service</geral@fcristino.com>	er (→ (↔ →) ··· 3/18/2020 Any has developed and meter.	Even charitable organizations aren't safe from these scammers, who claimed their phishing email came from UNICEF, diving deeper into psychological manipulation by pretending to be a children's charity.
1-888-3M HELPS (1-888-364-3577) Disposable face mask phishing email	UNICEF COVID-19 HPS APP UNICEF Inc <swift@allcounty.com> To Recipients UNICEF COVID-19 APParj I KB Find attached presentation & APP regardin dissemination. kindly download and install on how to protect your self and staff from t Kindly pass it on, Let join hand together an Thanks 1-760-597-2966 ext 135 UNICEF COVID-19 APParj UNICEF COVID-19 APParj UNICEF COVID-19 APParj COULT COULT APPART UNICEF COVID-19 APParj COULT APPART UNICEF COVID-19 APParj COULT APPART UNICEF COVID-19 APParj COULT APPART UNICEF COVID-19 APParj COULT APPART COULT APPART UNICEF COVID-19 APParj COULT APPART COULT APPART UNICEF COVID-19 APParj COULT APPART COULT APPAR</swift@allcounty.com>	g COVID-19 for your reference and on your system for dearly update and guide line his current deadly virus d fight this virus to the last.

Phishing email claiming to be UNICEF

Both email examples were used to spread commercial malware, such as AveMaria and NetWiredRC, likely purchased on dark web markets. Both families provide attackers with remote access into infected systems. In fact, here are a some of their capabilities:

- Remote desktop access
- Remote webcam control
- Password stealer
- Downloader
- Keylogger
- Remote shell
- Privilege escalation
- System manipulation

Many targeted attacks against organizations require reconnaissance, planning, and collection of information about the target. For example, a company may have an outdated version of an application installed on the base image they install on every system, and that could be a possible avenue for exploitation. When your target workforce is dispersed, there are fewer opportunities to identify specific individuals or systems for intelligence collection. As such, using the same tools to attack a corporate network may not work when dealing with a computer that may only have a loose connection to business systems.

The features found in these malware families are especially valuable when attackers are faced with an unknown environment. Criminals are using malware to learn what the most popular applications are and in doing so, are collecting information about how to be effective in this new landscape. Criminals are using malware to learn what the most popular applications are and in doing so, are collecting information about how to be effective in this new landscape.



Using tools that allow an attacker to see and control the desktop, steal passwords, and manipulate systems might seem like overkill for any regular operation, but a Swiss army knife approach is what cybercriminals need right now. As a result, Malwarebytes has seen an increase in detections of these threat families throughout the last few months. AveMaria saw a bump of 1,219 percent from January to April 2020, which is an enormous increase from what little we observed from this family during 2019. However, we noticed a massive drop in May, which may coincide with a change in tactics from the threat actors using this threat to gather information. According to our telemetry, AveMaria mostly targeted large enterprise businesses.

AveMaria saw a bump of 1,219 percent from January to April 2020, which is an enormous increase from what little we observed from this family during 2019.



Meanwhile, NetWiredRC increased significantly from 2019 to 2020, and even in 2020, we observed a 99 percent increase in detections from January to June. In contrast to AveMaria, NetWiredRC went after small- and medium-sized organizations. Considering the various methods of infection that NetWiredRC has historically used, from exploits to malicious spam, we aren't surprised to see this family doing so well.

8 Analyzing confidence and potential security hubris

Any data—particularly data that points to conflicting conclusions demands scrutiny, and that's just what we did when looking at some of the more contradictory results in our survey.

As stated earlier in our report, 73 percent of respondents scored their organization a 7 out of 10 or higher when evaluating their readiness to transition to WFH. This was a promising result, as it showed confidence on the part of IT managers, directors, and executives to maintain the productivity, performance, and security of their employees.

But in looking at how respondents specifically evaluated their security posture during WFH, we must consider a hidden modifier: security hubris. The fact remains that transitioning to a WFH model in the way many organizations were forced to do—immediately, with more devices, more software deployments, and limited in-person support—has already created opportunities for more attacks. In fact, our product telemetry shows an increase in cyberattacks on organizations and individuals ever since COVID took hold, as demonstrated in our last CTNT report measuring the rise in cybercrime since March 2020.

Despite this truth, when we asked respondents "How has your organization's level of security changed in the transition to working from home?" we learned that many managers, directors, and executives responded as though nothing had changed. Our top response was: "We're equally secure as we are in the office" (31.2 percent). However, it's more likely that home network configurations are less secure than the connection they would be using in an office.

Transitioning to a WFH model in the way many organizations were forced to do immediately, with more devices, more software deployments, and limited in-person support—has already created opportunities for more attacks. We've seen cybersecurity attacks that rely specifically on this type of human error. The Mirai botnet has repeatedly scanned cyberspace for Internet of Things devices that are still operating with default login credentials that came out of the box, using those credentials to take control of the device and trigger DDoS attacks. We cannot assume that every remote employee has changed the default password on their home router, yet, the response that organizations are "equally secure" assumes the opposite.

The second-most common response was: "We're slightly less secure than we were in the office" (26.7 percent). This answer is likely the most accurate when applied broadly to the post-COVID work environment. Simply put, employees likely aren't as secure as they were in an office because they don't have a dedicated security team to lock down their home routers or smart devices. These unsecured assets offer an avenue of entry into home and work networks, and allow for possible hijacking of company systems or connections.

If we combine the responses that favored at-home security over that in the office, we see that more than 35 percent of survey participants are potentially over-confident. "We're significantly more secure than we were in the office" received 18.3 percent of the responses and "We're slightly more secure than we were in the office" garnered 16.8 percent of the vote. We have to consider a separate possibility here that, perhaps, office networks were woefully under-secured to begin with and efforts were made to improve the baseline when moving to WFH. However, if that wasn't the case, this could be another indicator of more security hubris.

Perhaps IT leaders believe that because they are physically distant from their networks or offices, their security is no longer centralized and that means it's less likely for attackers to target them. Or perhaps they feel more secure because they are in control of their own security, versus trusting someone else. Those are assumptions we could all make, and we don't blame anyone for coming to those conclusions.

But whether it be a VPN connection onto the corporate network, corporate email accounts, or access to cloud-based services, most employees need to access their company's resources remotely. If an attacker is able to identify key information about a target, such as an email address or social media account, they may have an easier time infiltrating a personal network than a corporate one. That individual compromise can then be used as a springboard to greater corporate access.

The final response, and one that received the fewest responses was:

"We're significantly less secure than we were in the office" (6.9 percent). Despite its low ranking, we believe this should be the expectation when companies initially move to a remote workforce: Security will likely be subpar in comparison to what it was in an office setting. If IT leaders work from that assumption, they'll likely avoid making mistakes or ignoring issues that could leave their organizations vulnerable.



Perhaps IT leaders believe that because they are physically distant from their networks or offices, their security is no longer centralized and that means it's less likely for attackers to target them.

Most organizations will experience a drop in their ability to protect systems in the initial rollout to a fully remote workforce. Once new systems and tools have been established, configured, and deployed correctly, users will be as secure or maybe even more secure than when they were working in the office, but that's a finish line some organizations may never see.



9 Next steps for employers

We've learned a lot from our survey. Some companies are taking the right steps in protecting their resources and their employees, but they need to go further.

In addition, a percentage of companies that think they're doing just fine might not be.

The quick and unexpected switch to a mostly remote work force meant that new software and hardware to accomplish this task had to be purchased and rolled out quickly too quickly for proper security audits to be completed or procedures to be developed. Therefore, we understand that there were measures that needed to happen for immediate transition, and that there will be additional changes necessary to keep teams and organizations secure in the long run.

So, what is an employer to do?

In asking our respondents, "What kind of long-term changes will the recent transition to working from home have on your organization?" we were able to determine the top efforts being made to empower employees and optimize WFH security.

The most popular response was "develop stronger remote security policies" at 55 percent. We agree with respondents here, as stronger remote security policies are important for not only long-term security strategy but also unified execution across the organization moving forward. The goal is to deploy remote work security guidance that views the organization from an attacker standpoint, so be creative. The quick and unexpected switch to a mostly remote work force meant that new software and hardware to accomplish this task had to be purchased and rolled out quickly—too quickly for proper security audits to be completed or procedures to be developed.

A close second was "install a permanent WFH model for employees who don't need to be in the office every day" at 54 percent. This makes it possible to accommodate not only permanent WFH strategies, but also security that benefits workers who are out of the office on a business trip or vacation and need to access company resources.

Mirroring IT leaders' concerns that their employees needed more security training, 48.9 percent of respondents wanted to "host more trainings for WFH.



So many of the threats we have seen targeting WFH employees over the first couple quarters of 2020 are older, commercial threats. Training is important for WFH employees, however it can only be valuable if it's tailored to individual, team, or department needs and responsibilities. A blanket security policy and generic security training will only take organizations so far plus, workers are apt to pay better attention if the security advice is specific and relevant.

In an effort to see how well IT teams are testing new work-from-home technologies, we asked respondents if they planned on developing online privacy reviews for new software, and 44.6 percent replied "yes." An IT or security team that is deploying WFH tools needs to make sure those tools both function and keep communication and information secure. Sometimes new features are added to these tools that might change how they are configured, so conducting regular privacy and security audits on these technologies keep companies and employees safer.

Finally, 39.6 of survey participants said they would "deploy antivirus solutions that can better handle a remote workforce." So many of the threats we have seen targeting WFH employees over the first couple quarters of 2020 are older, commercial threats.



Using an antivirus solution on users' home and remote work systems is probably one of the best and easiest ways to secure against the types of attacks we're currently seeing in the wild.

This means that using an antivirus solution on users' home and remote work systems is probably one of the best and easiest ways to secure against the types of attacks we're currently seeing in the wild.

However, it's important to keep in mind that the solution you decide to use should be easy to deploy, run updates, run scans, and monitor detections from anywhere your employees might be located, something that is more important now than ever before.

10 Conclusion

This year hasn't been easy. With everything happening in the world, it is easy to let security slip the mind. In fact, it's only human to have a difficult time transitioning to remote work, let alone be productive.

However, these human traits and mistakes are exactly what cybercriminals depend on and exploit for their own gain. To that end, IT leaders must understand the strengths and weaknesses of their employees so that they can deploy technological solutions that not only protect them from threat actors, but from their own mistakes.

Frustratingly, some of the very decisions that companies have made to better support their employees to provide more software tools, to provide more devices—are the same types of decisions that can lead to a broader attack surface. Further, with the majority of workforces now working remotely, it is once again only human that some employees will begin to use their personal devices more and more frequently in completing their work.

Despite the conditions many companies have created—which threat actors are also now trying to take advantage of—these decisions were largely made to support the safety and security of employees. In the coming months, several forward-thinking decisions can help organizations fully realize their goal of a remote workforce that is equally as secure, or even more secure than, the previous office environment. In the coming months, several forwardthinking decisions can help organizations fully realize their goal of a remote workforce that is equally as secure, or even more secure than, the previous office environment.

For the security of your business and your employees, you should consider deploying an antivirus solution that can manage the now-dispersed endpoints in your workforce. As we saw, the more popular forms of malware today also happen to be older. These are known, recorded threats, and a strong cybersecurity solution should be more than be able to detect and remove these threats or better yet, protect against and defend your business before they have a chance to take hold.

Our survey also revealed that nearly half of all respondents are considering various cybersecurity measures in the coming months, whether that includes developing stronger remote security policies (55 percent) or installing a permanent WFH model (54 percent). We're more than half-way through the year now, and it's time that the other half of companies rise up. The tools are out there, and there are smart, secure ways to do this.

We cannot predict that the last months of 2020 will suddenly change for the better. Because of that, we have to prepare today to continue enduring tomorrow.

Stay safe.



For the security of your business and your employees, you should consider deploying an antivirus solution that can manage the nowdispersed endpoints in your workforce.



Contributors

Adam Kujawa Director of Malwarebytes Labs

Wendy Zamora Director of Content, Malwarebytes

David Ruiz Senior Content Writer, Malwarebytes Labs

Jovi Umawing Senior Content Writer, Malwarebytes Labs

Chris Boyd Senior Threat Intelligence Analyst, Malwarebytes Labs

Pieter Arntz Senior Threat Intelligence Analyst, Malwarebytes Labs **⊘alware**bytes

Malwarebytes Inc. 3979 Freedom Circle, 12th Floor Santa Clara, CA 95054 USA +1-800-520-2796

© 2020 Malwarebytes. All Rights Reserved.

Any brand name is the property of it's respective owner, is used for identification purposes only, and does not imply product endorsement or affiliation with Malwarebytes.