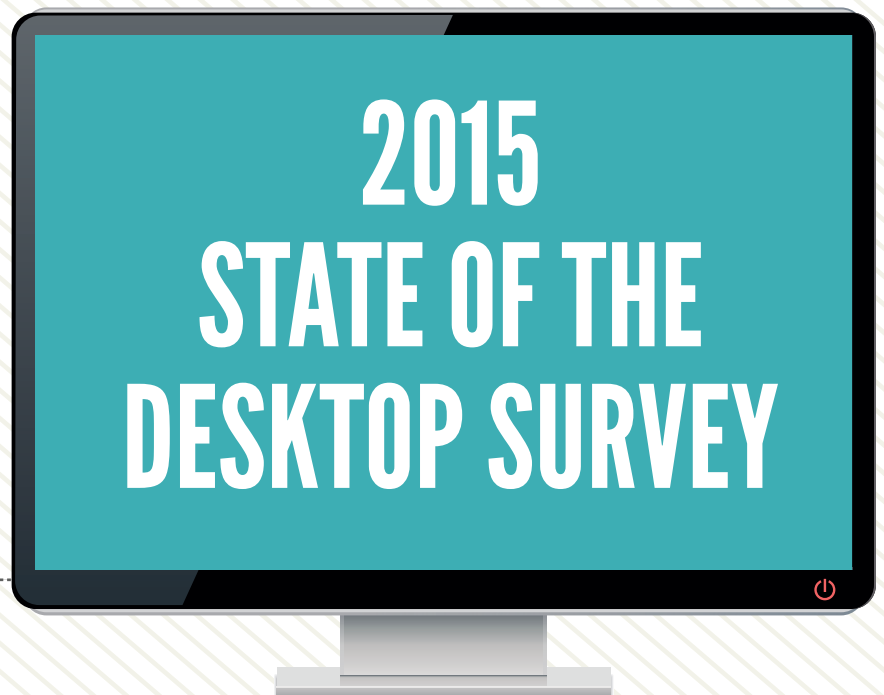




# EVOLVE

THE CLOUD SERVICES COMPANY™



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# INTRODUCTION

They say you need to like the people you work with because you spend more time with them than with your own family each week. It's just as important to like the technology you are working with each day, most importantly for office workers, your desktop. And, if you ever need to work remotely or from the road, your mobility-enabling technology is just as important. Since virtual desktops hit the market, they have followed what Gartner refers to as the typical "technology hype cycle," presently placed hosted virtual desktops on the "Slope of Enlightenment."\*\*

As we see that hosted virtual desktop solutions – i.e., Desktop-as-a-Service (DaaS) and Virtual Desktop Infrastructure (VDI) delivered as a service – are ascending the "slope of enlightenment," we determined it to be the ideal time to implement our 2015 State of the Desktop Survey with 1,031 executives and IT professionals.

Evolve IP's 2015 State of the Desktop Survey examined the types of desktops being used today and the levels of awareness and adoption of virtual desktops in North American organizations.

Specifically we looked at:

- Types of desktops being utilized
- Knowledge levels of various virtual desktop technologies
- Devices being used to access virtual desktops
- Desktop budgets
- IT staff time spent handling desktop issues
- Benefits of virtual desktops

A total of 1,031 respondents participated in the web-based survey. Fifty-five percent of the respondents were from organizations with between 100-2,000 employees; 22 percent from organizations with less than 11-99 employees; 17 percent from organizations with more than 2,000 employees and 6 percent from organizations with 1-10 employees.

\*\* <http://www.gartner.com/technology/research/methodologies/hype-cycle.jsp>



**\*\*Gartner Hype Cycle "Slope of Enlightenment":** More instances of how the technology can benefit the enterprise start to crystallize and become more widely understood. Second- and third-generation products appear from technology providers. More enterprises fund pilots; conservative companies remain cautious.

# KEY FINDINGS

- Of those organizations not presently using virtual desktop, 32.5 percent plan to move their employees to some type of virtual desktop within the next three years.
- Ninety-seven-and-a-half percent of those using DaaS or VDI are satisfied with it.
- The overall level of awareness about virtual desktop options is low, with 26 percent of those surveyed claiming no knowledge about Desktop-as-a-Service (DaaS) before taking this survey.
- Awareness is notably lower with C-Level executives as compared to IT professionals. Thirty-nine percent of executives had no knowledge of DaaS before taking our survey, compared to just 12 percent of IT professionals.
- Although the awareness is low, the need for virtual desktop and remote monitoring and management (RMM) solutions is high, as respondents are looking to reduce time spent managing desktops, reduce budget spent on refreshing traditional desktops and enabling BYOD and mobility. In fact, 59 percent of respondents using virtual desktops claim mobility as a leading benefit and another 42 percent say the same about the cost savings they enjoy.
- The leading benefit of virtual desktops selected by respondents (59 percent) is mobility enablement.
- Nearly five-in-10 executives working with virtual desktops who have this solution deployed note cost savings as a main benefit of virtual desktops.
- The majority of IT professionals (63.5 percent) using virtual desktops say that virtual desktop solutions benefit them with time savings and efficiency.
- The majority of organizations (65.5 percent) are still using VPN to access their work files to work remotely versus 18.5 percent that are using virtual desktops for mobility enablement.

## AWARENESS OF RMM, DAAS AND VDI

We began our survey by determining the level of knowledge our survey respondents have about Desktop as a Service (DaaS), Virtual Desktop Infrastructure (VDI) and Remote Monitoring & Management (RMM) solutions. Respondents are most knowledgeable about RMM, with 57.5 percent considering themselves moderately to very knowledgeable.

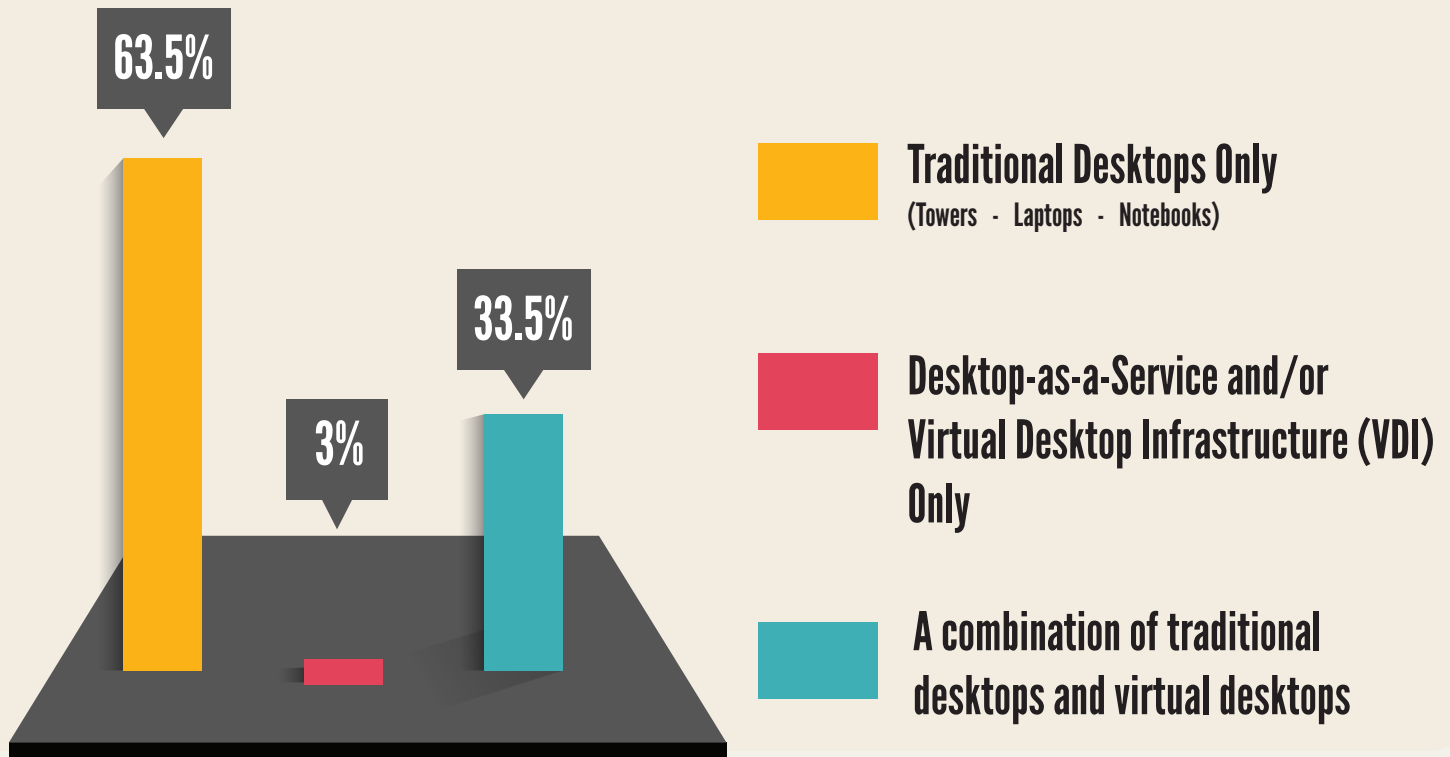
They are least knowledgeable about DaaS, with 26 percent claiming they had no knowledge before reading our description. These results signify that there is a significant need for education about DaaS technology.

There is a clear difference in awareness when looking at company size. Organizations with 10 or less employees are markedly less knowledgeable about virtual desktop solutions than larger organizations. For example, half of organizations (49 percent) with 10 or less associates have no knowledge about VDI, while only 6.5 percent of respondents at companies with 2,001-5,000 employees said the same.

## ADOPTION OF RMM, DAAS AND VDI

When looking at the adoption rate of virtual desktops today, we note that 36.5 percent of respondents have adopted some level of virtual desktops, yet, most are not deploying across their entire organizations.

### DESKTOP TYPES ORGANIZATIONS ARE DEPLOYING TO USERS



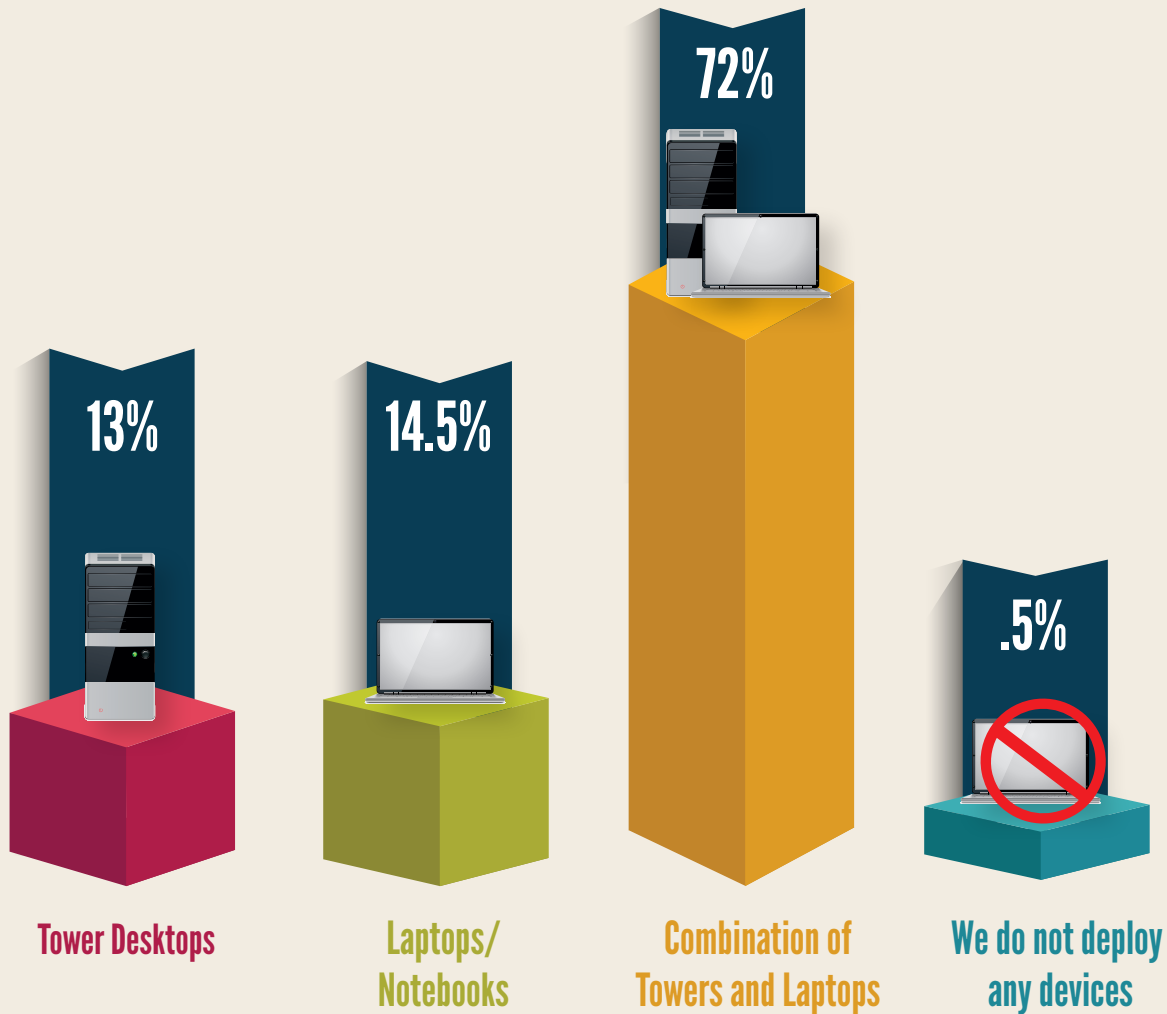
This is not surprising given that many companies are not always prepared or comfortable to go “all in” with the cloud upfront. Commonly, companies will begin with a pilot program or leverage virtual desktops for a single work group, department or satellite office. Once that beta group has found the solution to be sound, it is rolled out to others in the organization.

## EVOLVE Notes

With an RMM solution, both virtual and traditional desktops can be monitored and managed, which enables organizations all the time they need to test virtual solutions before rolling them out company-wide.

# DEPLOYMENT OF ONLY TRADITIONAL DESKTOPS

The majority of organizations that are only using traditional desktops are deploying a combination of towers and laptops (72 percent), while 13% of those are utilizing only tower desktops. As mobility needs continue to grow, we see the use of tower desktops continuing to decline.



● TYPES OF DEVICES ORGANIZATIONS DEPLOY TO EMPLOYEES AS THEIR MAIN COMPUTER

## EVOLVE Notes

Although less than one percent of those surveyed are completely practicing BYOD, our prior survey on Mobility and BYOD found that 47 percent of those surveyed are active BYOD participants with 13 percent having devices administered / secured by their organization's IT staff. When we compare the data from that survey with this survey, we hypothesize that the 13 percent of organizations using only tower desktops today will likely skip over the evolution to using laptops and go directly to a BYOD model, using Mobile Device Management (MDM) to manage users and secure company data.

Of those organizations not presently using either DaaS or VDI at all, nearly one-third of them (32.5 percent) plan to move their employees to some type of virtual desktop within the next three years.

# ONE in THREE



## plan to implement DaaS or VDI

The leading reason that those who claim they will never move their organization to virtual desktops is that they don't have the mobility requirements to justify it. Although that may be true today, our [2014 Mobility and BYOD Survey](#) revealed very high percentages of mobility and BYOD programs, indicating that there will be a greater need for these programs going forward. The second leading reason is that they don't know enough about it.

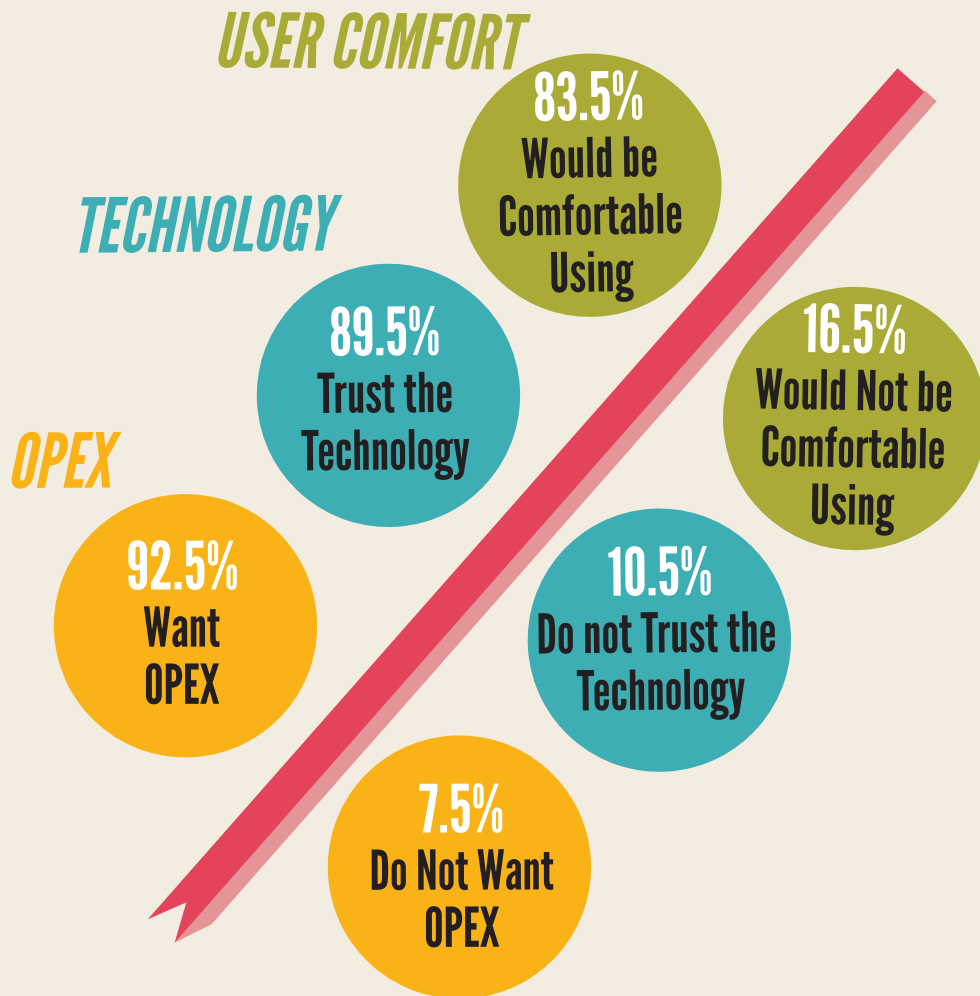
On the other hand, there are many compelling reasons why they should move to virtual desktops, including:

- 83.5 percent feel their users would be comfortable with the technology, which implies that once organizations decide to implement a virtual desktop solution, user adoption will not be an issue.
- 92.5 percent claimed that they prefer an OPEX model, which illustrates that they would be great candidates for a DaaS solution, since it is paid for via a predictable, per-user, monthly spend.
- Despite the fact that the survey results indicate that there is a great lack of knowledge about virtual desktops, with 20 percent claiming that as their reason for not considering virtual desktops, it is interesting that only 10.5 percent of the respondents claim that a lack of trust in the technology is their reason.



***83.5 percent feel their users would be comfortable with the technology***

● DaaS / VDI: LOW BARRIER TO ENTRY



## EVOLVE Notes

[Evolve IP's 2014 Mobility and BYOD Survey](#) revealed that almost all businesses (95 percent) either support or enable mobility, work from home, and / or BYOD programs. Nearly half of the 566 business professionals surveyed (49 percent) stated that their company provides a cell phone and / or tablet for work use, while another 47 percent bring their own devices. Thirteen percent use their own cell phone and / or tablet for work use, but it is administered / secured by the IT staff of their workplace.

As mobility requirements continue to grow and as employees become more educated, it is clear that adoption of VDI and DaaS will steadily increase in the coming years.



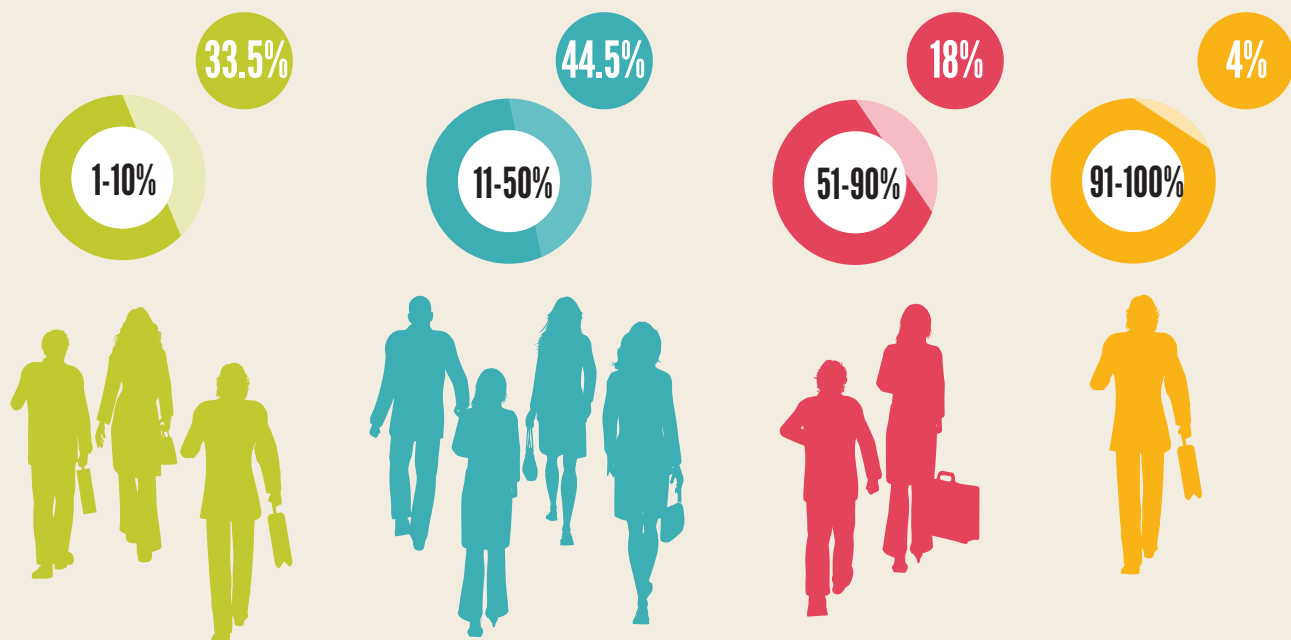
# ORGANIZATIONS USING DAAS OR VDI

The results of the survey indicate that the organizations presently using virtual desktops are very satisfied with the solutions and are reaping the mobility benefits they provide. In fact, 97.5 percent noted that they are satisfied with their virtual desktop solution.

Virtual desktop solutions have enabled these organizations' associates to work remotely during severe weather incidents, outages, and other unplanned situations, circumventing critical downtime to their businesses.

When looking at the percentage of staff that is presently using virtual desktops, we see that the majority of organizations have less than half their staff working on virtual desktops. This is not surprising, given that many organizations start using virtual desktop solutions in test programs, with just a segment of the staff, before fully adopting and rolling out to the rest of the organization. Other organizations deploy virtual desktops to knowledge workers, but choose to provide traditional desktops or laptops to their associates who are using graphic-intensive programs and don't have mobility requirements.

## PERCENTAGE OF STAFF USING DAAS OR VDI



So, 33% of all companies using virtual desktops have 1-10% of their employees on the service

44.5% of all companies using virtual desktops have 11-50% of their employees on the service

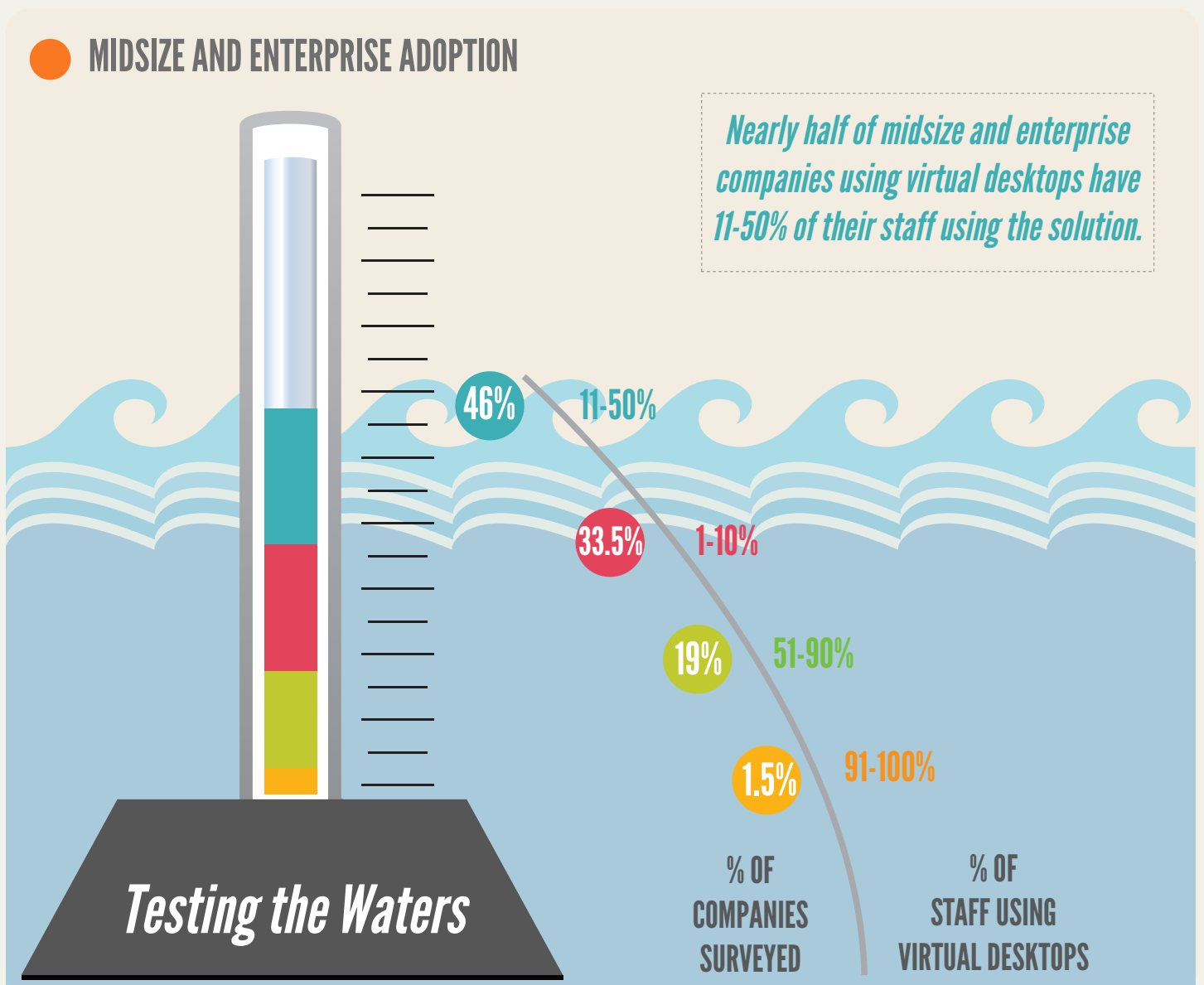
18% of all companies using virtual desktops have 51-90% of their employees on the service

4% of all companies using virtual desktops have 91-100% of their employees on the service

Looking at the same results broken down by company size, it is noteworthy that small businesses (those with 10 or less employees) have a higher percent of their staff using the solution when compared to mid-size and larger organizations. Nearly half (44.5 percent) of those organizations with virtual desktops in place with 1-10 employees have more than 40 percent of their staff using virtual desktops. In fact, 22 percent of these organizations have 60 percent or more employees on virtual desktops. Additionally, just 11 percent of this segment only have 10 percent or less of their employees on virtual desktops.

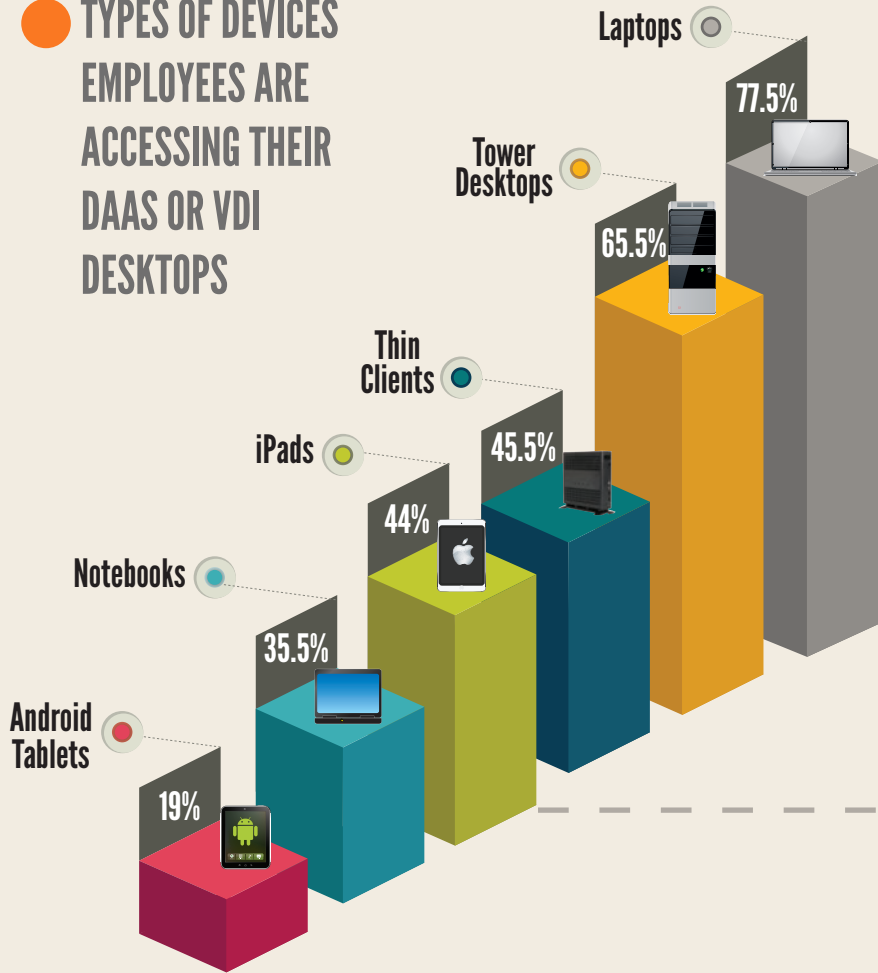
This is not surprising as historically, small businesses have been adopters of cloud-based solutions of various types, inherently needing such benefits as an OPEX low monthly fee model, reduced need for internal IT administration, and more.

The survey also indicates that the second highest usage rate is large enterprise companies (those with 5,000 or more employees) where 27 percent have more than four-in-10 users on virtual desktops. This segment also had the second lowest percentage (24.5 percent) that only have 10 percent or less of its associates using virtual desktops.



A vast majority (72 percent) of those organizations that are at least partially virtualizing their desktops are using self-hosted VDI, while just 4.5 percent are using DaaS today.

**TYPES OF DEVICES  
EMPLOYEES ARE  
ACCESSING THEIR  
DAAS OR VDI  
DESKTOPS**



*44% of users are accessing their DaaS or VDI on an iPad – which means they are able to run Windows natively.*

The majority of employees using some type of virtual desktop, are accessing their DaaS or VDI desktops via laptops (77.5 percent.) However, it is interesting to note that 35.5 percent are using much less expensive and highly portable notebooks or Chromebooks for access, and another 44 percent are accessing their virtual desktops via an iPad. This indicates that organizations are indeed taking advantage of the mobility and BYOD enablement offered by virtual desktop solutions.

**W**hen asked what organizations like most about their virtual desktop solution, the leading benefit was mobility, with 59 percent. This was followed closely by time savings/efficiency at 55.5 percent.



**59% enjoy mobility enablement**

**More than half appreciate the time savings & efficiency improvements**

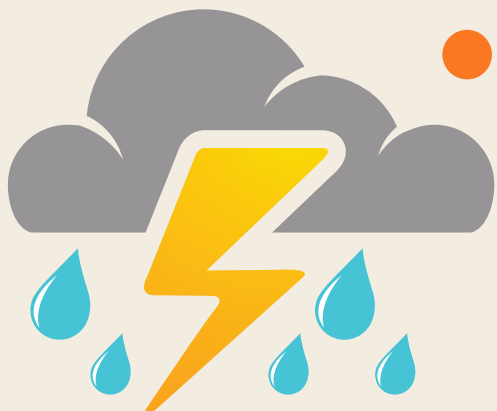


**45% prefer the security provided**

**Four in ten note cost savings**



Six-in-10 of those organizations that are using virtual desktops say they have used them to enable staff to work remotely during an outage or severe weather incident or other business disruption.

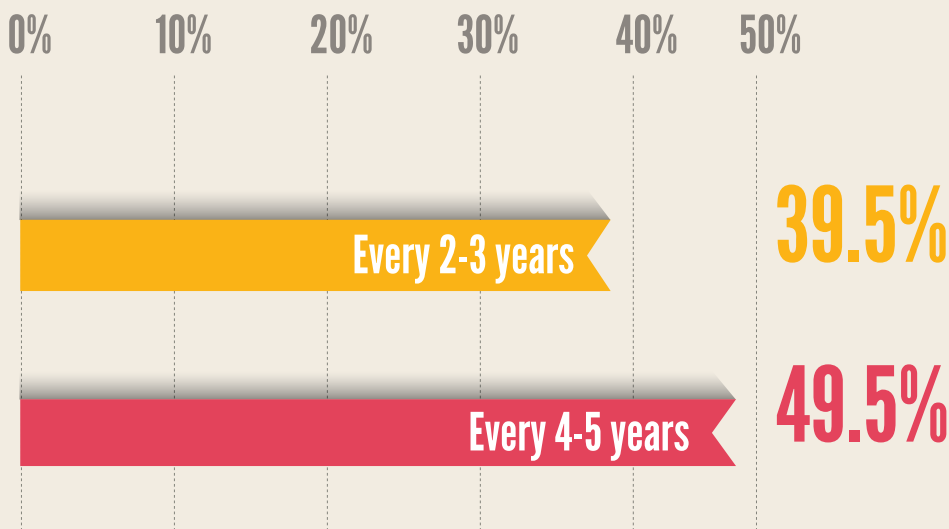


● ORGANIZATIONS USING VIRTUAL DESKTOPS TO ENABLE STAFF TO WORK REMOTELY DURING AN OUTAGE OR SEVERE WEATHER

# Six in Ten



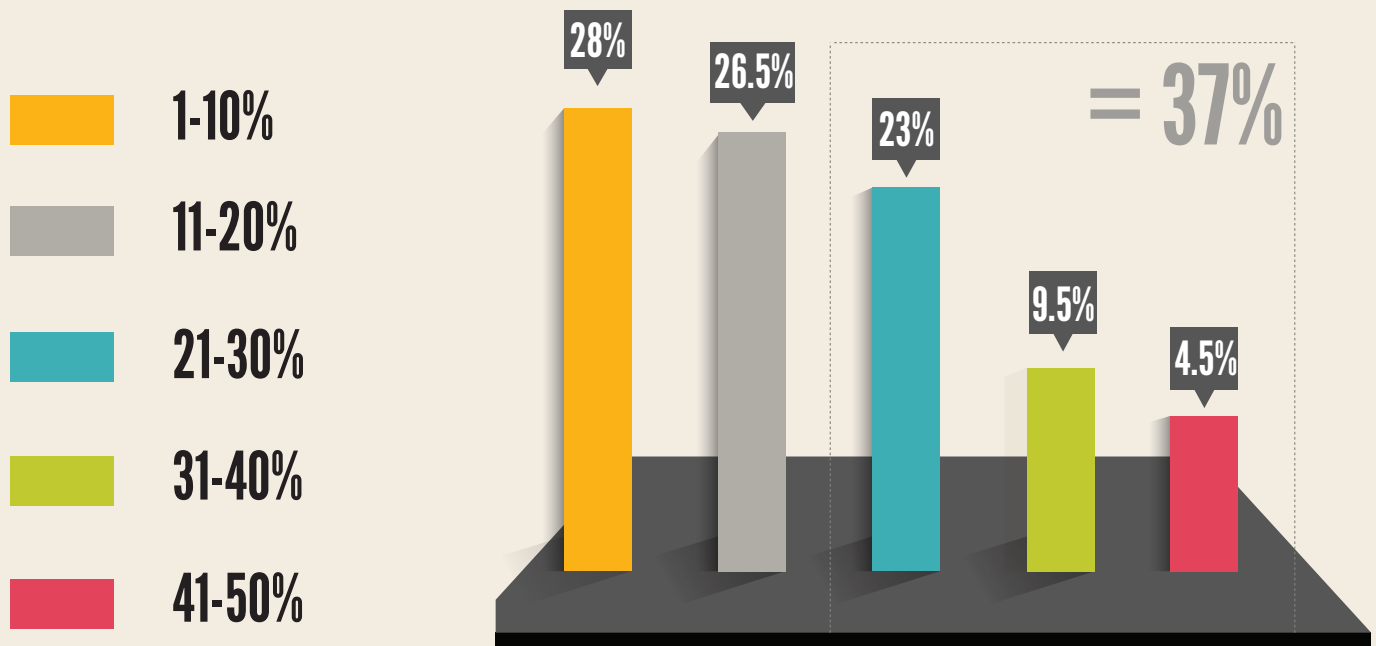
Half of the organizations surveyed (49.5 percent) refresh their employees' computers every four to five years and another 39.5 percent do so every two to three years. As more businesses adopt virtual desktops in the coming years, we expect to see these percentages change; because no software needs to be required locally on the hardware, virtual desktop solutions extend the life of desktop hardware. Additionally, DaaS and VDI – as well as Remote Monitoring and Management (RMM) solutions – enable organizations to allow their BYOD programs to extend from cell phones to laptops and tablets.



● HOW OFTEN DOES YOUR ORGANIZATION REFRESH EMPLOYEES' COMPUTERS?



**M**ore than a third of those surveyed (37 percent) are allocating between 20 and 50 percent of their budget on desktop hardware.



**PERCENTAGE OF IT BUDGET ALLOCATED TO DESKTOP HARDWARE FOR ORGANIZATIONS' EMPLOYEES**

**40.5% SPENDING MORE THAN \$100K**

Four-in-10 (40.5 percent) of the organizations polled with 100 or more employees are spending \$100,000 or more annually on desktop hardware and software for their employees.

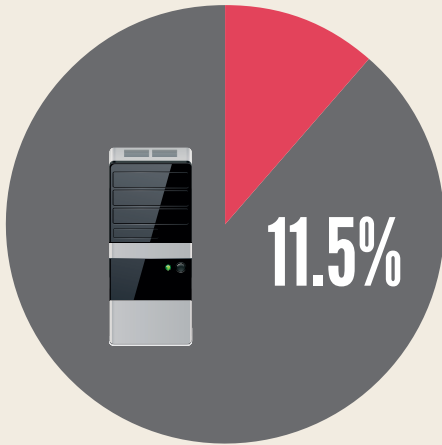


**12%**  
*of all IT professionals surveyed spending half their time or more*

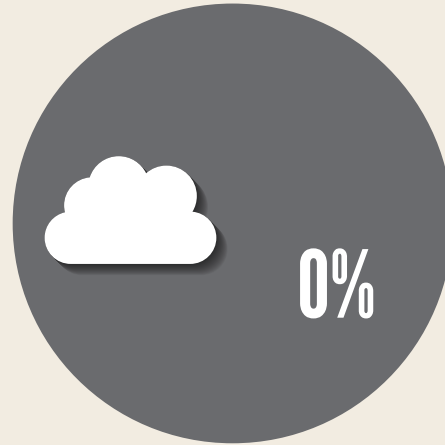
Twelve percent are spending half their time or more dealing with their organizations' desktops (including upgrades, researching and making purchases, installation of hardware and software, trouble shooting and dealing with user issues, etc.) Another 43.5 percent are spending between 21-50 percent of their time doing the same.

**W**hen comparing those organizations using just traditional machines to those using virtual desktops, we conclude that those using traditional spend more time handling desktop issues than those organizations using virtual desktops. In fact, 11.5 percent of those using only traditional machines are spending more than 50 percent of their time dealing with desktops, while none of those using virtual desktops spends the same amount of time.

**TRADITIONAL VS. VIRTUAL: SPENDING MORE THAN 50% OF TIME HANDLING DESKTOP ISSUES**



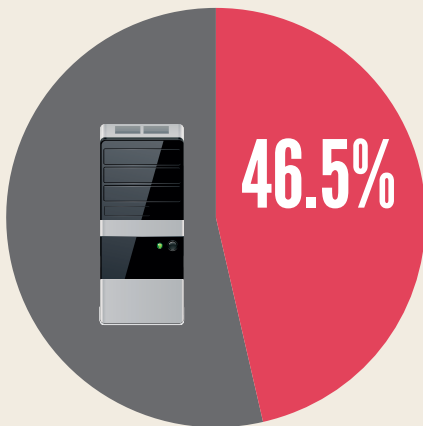
*Traditional Desktops*  
**More than 50%**



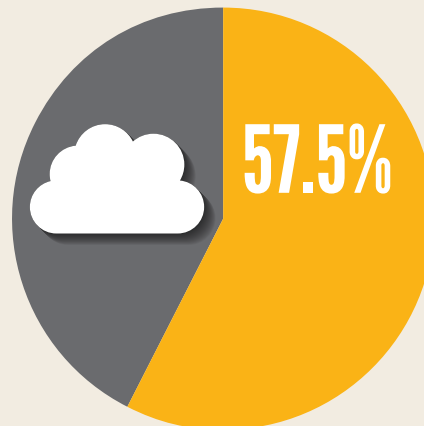
*Virtual Desktops*  
**More than 50%**

Additionally, the majority (57.5 percent) just using virtual desktops spend less time dealing with desktops, in comparison to those managing traditional desktops.

**TRADITIONAL VS. VIRTUAL: SPENDING 20% OR LESS OF TIME HANDLING DESKTOP ISSUES**

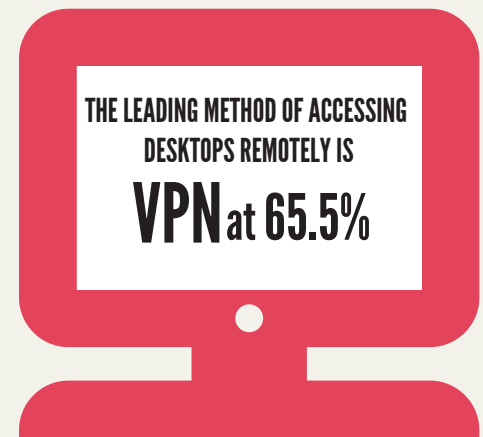


*Traditional Desktops*  
**20% or less**



*Virtual Desktops*  
**20% or less**

The leading method organizations use today to remotely access their desktop applications and files is VPN at 65.5 percent. Thirty-eight-and-a-half percent of them access the VPN via a company-provided laptop and 27 percent via their personal computer. Eight percent of those surveyed are not able to work remotely at all – 3.5 percent because they are only able to access their programs and files at the physical office and 4.5 percent because the organization does not authorize staff to work remotely.



## EVOLVE Notes

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This survey found that 65.5 percent of organizations are still using a VPN to access their network versus 18.5 percent that have some users on virtual desktops and are able to access their entire desktop image on any device.

Historically a VPN has been the solution of choice to enable worker mobility but as many users have discovered the technology has significant limits. For example:

- **VPN-enabled device required:** Users are required to download files and save them locally in order to work on them. Plus, while a VPN provides access to files on the corporate network, you can't access your work desktop applications locally over the VPN. If you're suddenly stuck at home without your CPU due to a sudden snowstorm or sick child you won't be getting any work done.
- **Bandwidth issues limit productivity:** While a VPN provides you with access to your company's network, the experience is dependent on the functionality of your machine and the traffic running through the VPN at the time. Events that cause a significant spike in use will also cause a significant degradation in performance.
- **Inherent security risks:** Many executives and business end-users have a misconceived notion that the VPN is an encrypted tunnel between their device and the network. In actuality, although your communication is encrypted over a VPN, there are still risks to passing along viruses or malware. And, the more open tunnels there are into your environment, the more paths are opened that have access to it. If you don't have local virus protection or a firewall, you are endangering the corporate network.

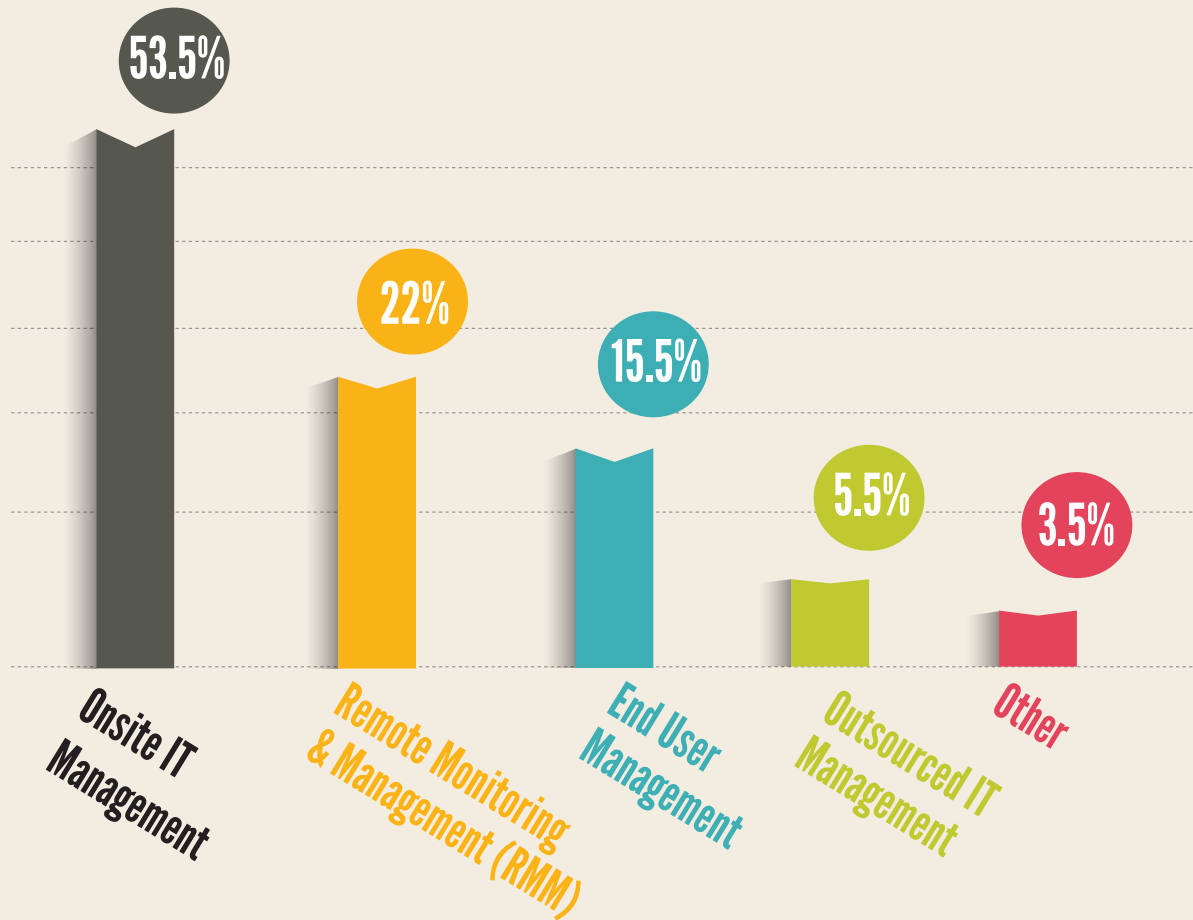


As you would expect with newer, more advanced mobility technologies the drawbacks to a VPN have been mitigated:

- **Persistence:** With a virtualized desktop, you are logging into the actual desktop you use every day at the office, and your documents are already open and ready to be worked on.
- **Productivity:** Users are more productive and able to ‘work from anywhere’ using the device of their choice; just as if they were in the office. IT professionals spend less time updating and fixing user hardware and are able to focus on strategic projects that help build the business.
- **Security:** With a virtual desktop solution, the device you are using never actually touches the desktop – it is simply being accessed via a client or web-browser. Since many offerings feature built-in antivirus and malware protection for the virtual desktop, those security elements are not as necessary on the user device. End users access their full desktops via a client or web browser via secure SSL.
- **Convenience:** There’s no need for users to lug home a laptop – they can login to their exact desktop from a home CPU, laptop or tablet. For IT professionals, the centralization furnished by virtual desktops provide significant administrative advantages that include easier provisioning, troubleshooting and updates.
- **Cost:** Virtual desktops allow companies to extend the life of their current hardware and, when the time comes, replace expensive towers and laptops with more cost-efficient devices.

In conclusion, a virtual desktop is a more efficient and secure technology to keep employees productive outside the four corporate walls. With DaaS or VDI, you can deliver a consistent, highly-functional environment to end-users on any device – including Mac devices – from any location. You will mitigate user-productivity issues, regardless of device and enable users to use their own devices.

**W**hen reviewing how desktops are being managed, the majority of organizations (53.5 percent) are managing their desktop environments manually / physically, in person, and another 15.5 percent are allowing end-users to manage their own desktops, and IT is only managing in reactive situations. It's also notable that nearly one-in-four of those surveyed (22 percent) are using a Remote Monitoring and Management (RMM) solution to manage their desktop environment.

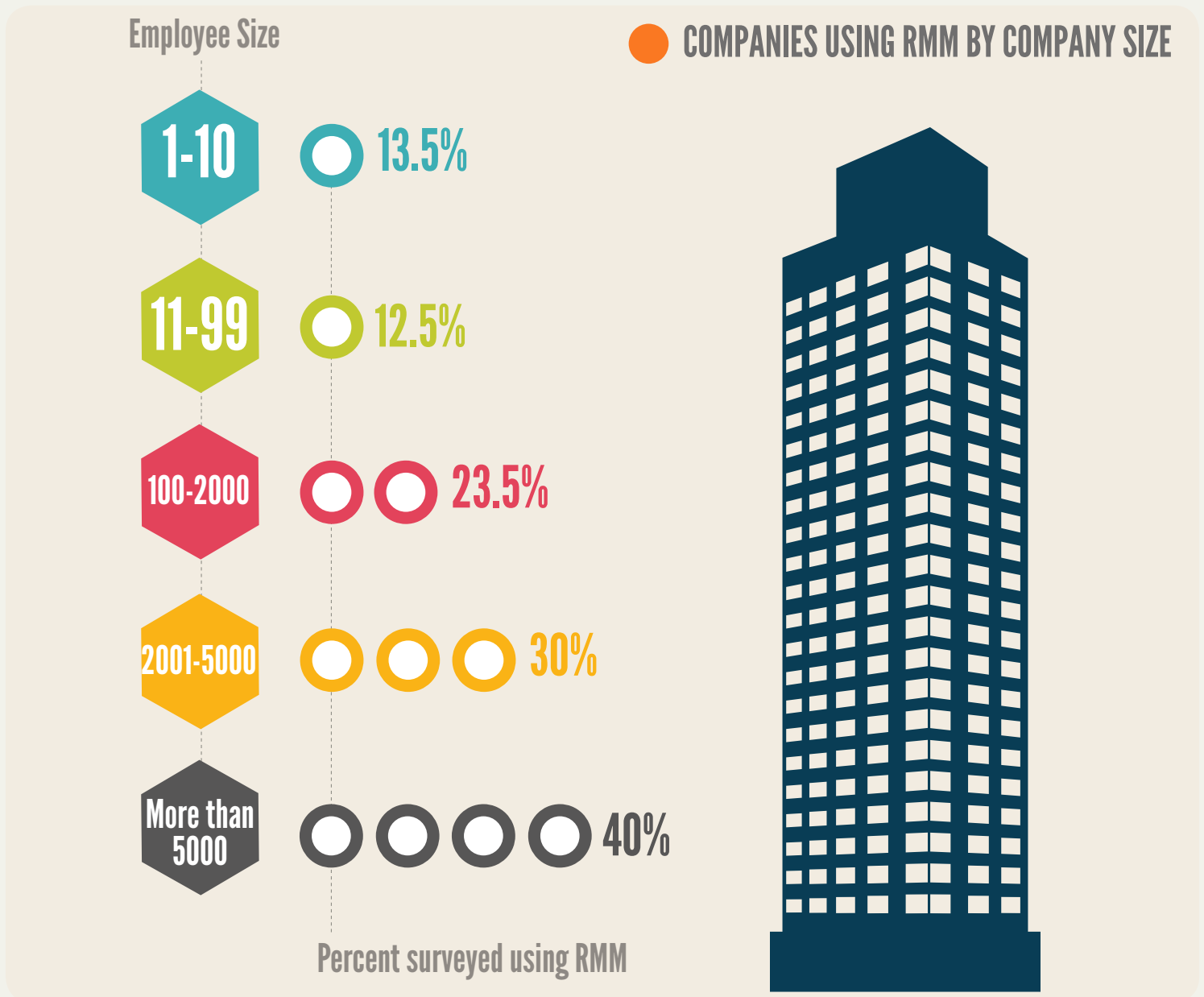


● HOW ORGANIZATIONS MANAGE THEIR DESKTOP ENVIRONMENTS

## EVOLVE Notes

With more than three-quarters of organizations managing their IT solely internally and another 16.5 percent managing their IT partly internally and partly with outsourced or remote IT staff, those organizations' IT associates would be able to work more efficiently if they deployed an RMM solution.

The survey results reveal a direct correlation between the size of an organization and the percentage using an RMM solution. For example, just 12.5 percent of companies with 11-99 employees utilize RMM, while 40 percent of companies with more than 5,000 employees use RMM.



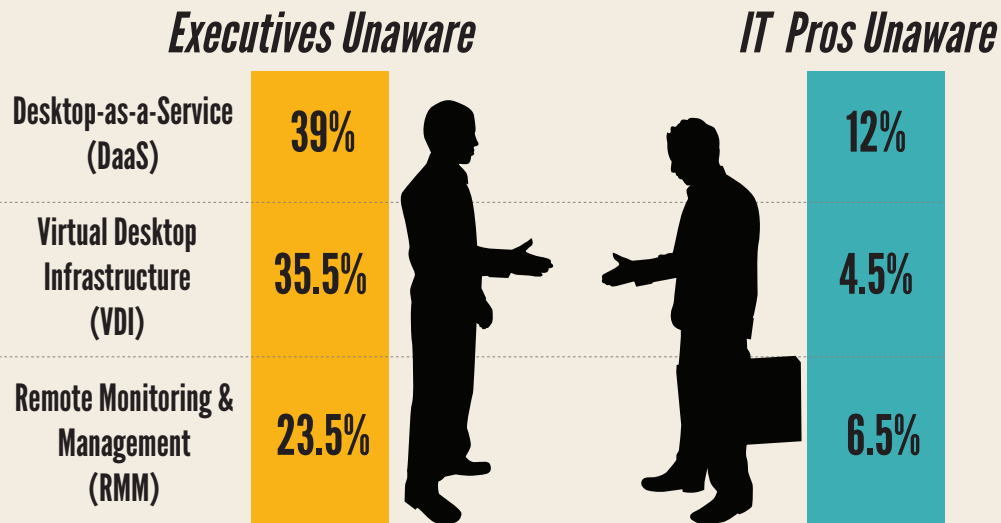
## EVOLVE Notes

Only two-in-10 are leveraging the capability of RMM, which is more efficient than the 53 percent physically managing at the deskside and more secure than the 15.5 percent allowing users to administer and manage their own desktops.

# SERVER ROOM VS. BOARD ROOM

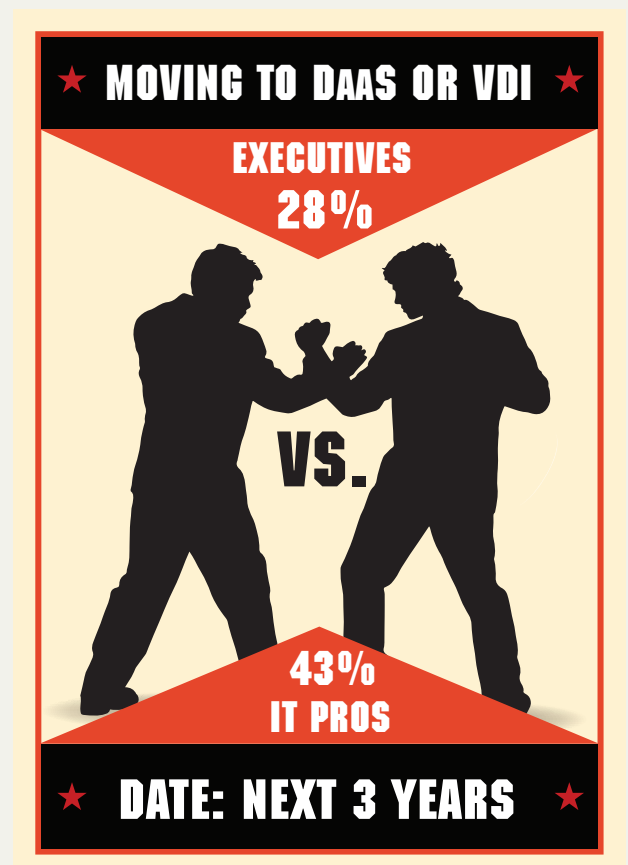
There is a marked difference in awareness about virtual desktop solutions and RMM between IT professionals and other executives (CEOs, COOs, CFOs) Nearly four in 10 executives had no knowledge of DaaS before taking our survey, compared to just 12 percent of IT professionals.

## EXECUTIVES VS. IT PROS: LACK OF AWARENESS OF DESKTOP TECHNOLOGIES



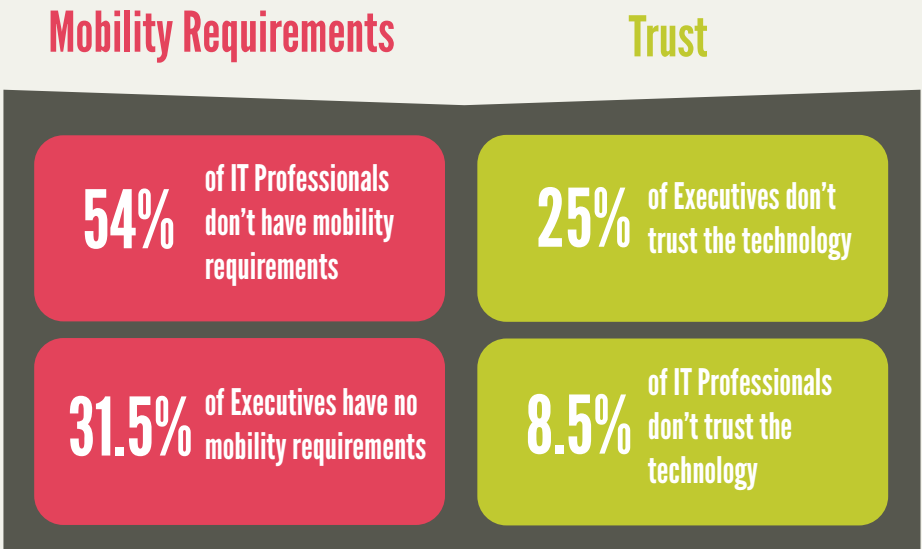
When looking at smaller organizations, executives are far less knowledgeable about DaaS and VDI than IT professionals. For example, looking at companies with 11-99 employees, 42.5 percent of executives have no knowledge about DaaS, versus just 19 percent of IT professionals. Similarly, looking at companies with 10 or less associates, 51.5 percent of executives have no knowledge about VDI, versus just 15.5 percent of IT professionals.

When comparing the responses of executives to those of IT professionals, 43 percent of IT pros plan to move some users to virtual desktops compared to 28 percent of executives within the next three years. That number jumps to a 24 percentage point difference when looking out to five years, with 60 percent of IT pros compared to 36 percent of executives.



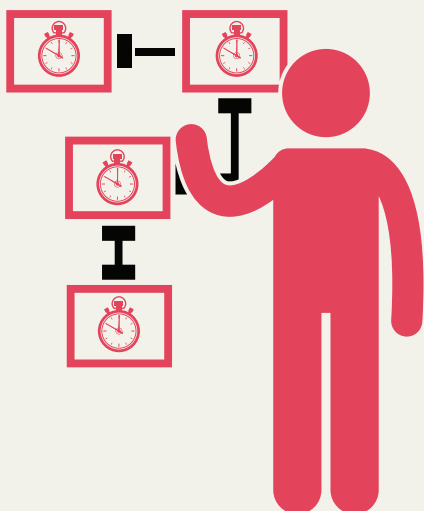
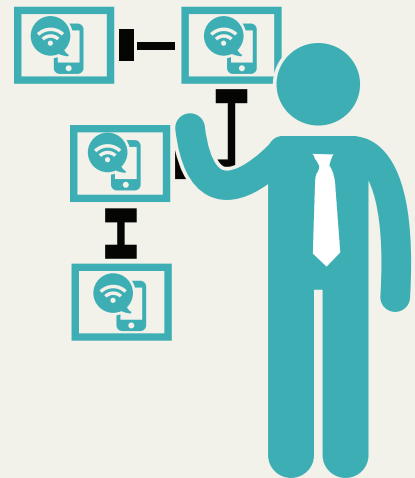
# REASONS STATED FOR NOT DEPLOYING VIRTUAL DESKTOPS

When comparing reasons given by executives to those given by IT professionals, there are marked differences. While the majority of IT professionals (54 percent) stated they don't have any mobility requirements, the leading reason for executives was a tie between not having mobility requirements and not knowing enough about it, each at 31.5 percent. There was also a notable difference between the two audiences in regard to their trust of the technology; 25 percent of executives claim they don't trust the technology versus only 8.5 percent of IT professionals.



There is a predictable difference between executives and IT professionals in regard to their favorite benefit of a virtual desktop solution. The leading benefit for executives is "Mobility" with 64.5 percent, while the leading benefit for IT professionals is "Time savings / efficiency" with 63.5 percent.

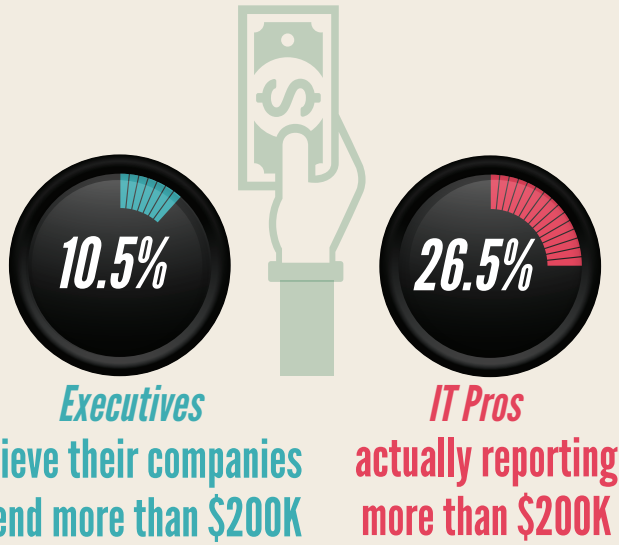
**64.5% of Executives** note "*Mobility*" as the *leading benefit* of virtual desktop solutions.



**63.5% of IT Pros** note "*Time savings / efficiency*" as the *leading benefit* of virtual desktop solutions.

There is a noted lack of awareness as to how much is actually being spent on desktop hardware and software by the executives at organizations with 100 or more employees. Specifically, 26.5 percent of IT pros report spending more than \$200,000 on hardware and software, while only 10.5 percent of executives believe their organizations are spending this much. These results clearly indicate that executives are not aware of how much of their organizations' IT spend is actually going toward desktop hardware and software.

**EXECUTIVES VS. IT PROS: ORGANIZATIONS WITH MORE THAN 100 EMPLOYEES**



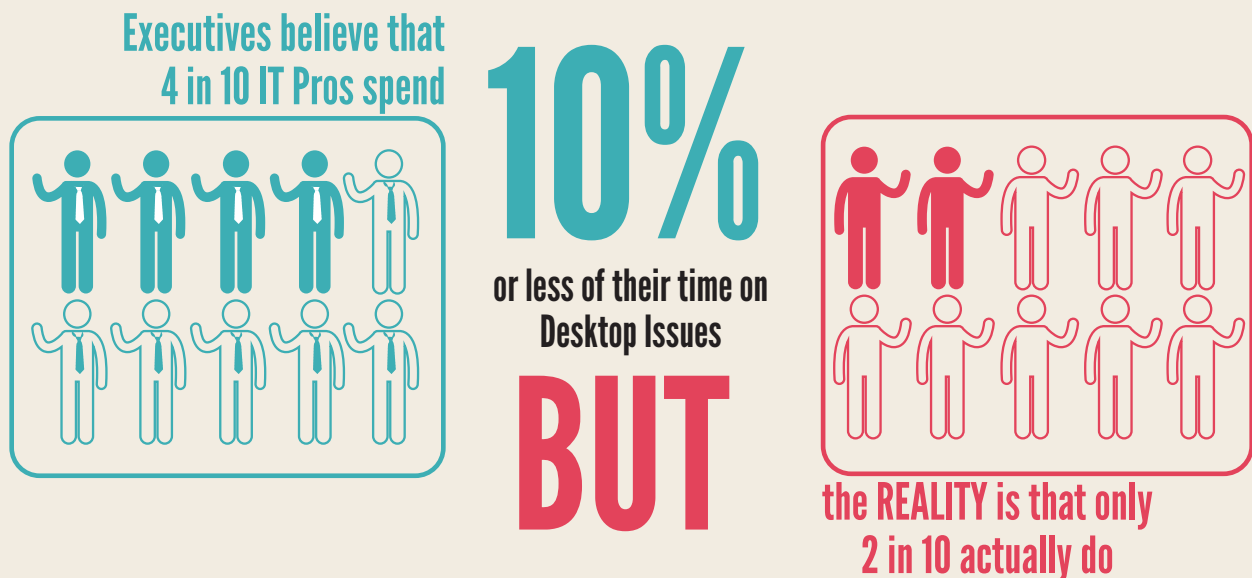
**EVOLVE IP Notes**

If executives were better informed about the amount spent annually on their employees desktops, they might move more readily toward a VDI or DaaS solution, which would reduce those costs.

The survey revealed a notable difference in perception of IT professionals versus executives in regards to the amount of time IT staff spends dealing with desktops.

While 20.5 percent of IT professionals claim to spend 10 percent or less of their time dealing with desktops, executives believe that 40 percent spend 10 percent or less. This difference clearly signifies that executives are not aware of the amount of time their IT team actually spends handling desktop issues.

**EXECUTIVES VS. IT PROS: TIME ON DESKTOP ISSUES**



# CONCLUSION

As other cloud services, such as cloud-based CRMs and Voice over IP phone service, reach rapid adoption, Evolve IP sees virtual desktop solutions (i.e., DaaS and VDI) heading onto the same path. Our survey results indicate that 26 percent of those surveyed claimed no knowledge about Desktop-as-a-Service (DaaS) before taking this survey. Those that are familiar are working toward adoption with 32.5 percent of those organizations not presently using DaaS or VDI planning to move to virtual desktops within the next three years.

There were many notable differences in the survey results between executives and IT professionals. Awareness about virtual desktop technologies and remote monitoring and management solutions is notably lower with executives as compared to IT professionals. In fact, 39 percent of executives had no knowledge of DaaS before taking our survey, compared to just 12 percent of IT professionals.

Despite a low rate of adoption for these technologies today, the need for virtual desktop and remote monitoring and management (RMM) solutions is high, as respondents are looking to reduce time spent managing desktops, the budget spent on refreshing traditional desktops, and enabling BYOD and mobility.

The leading benefit of VDI and DaaS stated by survey respondents is mobility enablement. However, the majority of organizations (65.5 percent) are still using VPN to access their work files to work remotely versus 18.5 percent that are using VDI or DaaS for mobility enablement. Drivers for virtual desktops versus VPN include a more efficient and secure way for companies to keep employees productive outside the four corporate walls. As organizations begin to learn more about the benefits of virtual desktops, Evolve IP expects mobility needs to contribute greatly to driving the adoption of virtual desktops.

Lastly, executives identified the associated cost savings as the main benefit of virtual desktops, while IT professionals are benefitting most from the time savings and efficiency they gain. With benefits that speak to the most pressing pain points that every organization seeks to mitigate, it's just a matter of time before virtual desktop reaches wide adoption.