Cisco mConcierge

VIRTUALIZATION: THE PUBLIC KNOWLEDGE GAP

A Cisco mConcierge Study

July 2013

Executive Summary

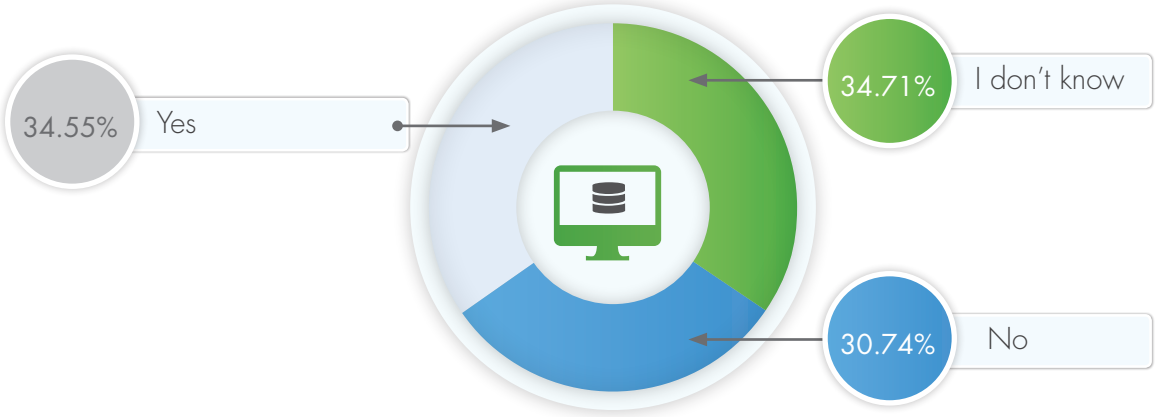
A group of Cisco partner firms commissioned a study to examine the working public's knowledge of desktop virtualization as a productivity tool and server virtualization as advanced IT infrastructure. The group of partners found that there exists a sizeable knowledge gap between what IT managers and CIOs are reporting about virtualization and what everday workers know about the technology.

- 40% of knowledge workers hadn't even heard of virtualization.
- 54% of non-IT workers haven't heard of virtualization
- 80% of senior management, VPs and SVPs don't know how virtualization will benefit their businesses
- Only 34% of workers believe virtualization technologies are employed in therir workplaces

Despite the knowledge gap among information workers, many are benefiting from the deployment of virtualization supported technologies.

- 46% of workers can access their work desktops from any device
- 65% of workers who've had a virus on their work computers had it restored in 1 business day
- A majority of workers reported that software is automatically deployed onto their computers

Are desktop or server virtualization technologies employed at your workplace?



Following the results of the study, you can find an apendix that includes a brief summary of desktop and server virtualization.

"Virtu-what?"

It's often that a revolutionary but functional technology goes unheralded by the greater public. Ask a group off the street what DNS or HTTP stands for and you won't get many right answers.

On the other hand, most people can see how smartphones, tablets and netbooks are changing the modern workplace. Mobility as a tech trend is easier for people to see in progress. It means being able to work anywhere on any device. The Cloud is another example. The public is becoming more comfortable with the concept as brands like Apple and Spotify now offer consumers hosted offerings for music, file storage and disaster recovery.

Yet a tech concept enabling all these technologies, virtualization, is still 'virtually' unknown among full-time information workers. A study commissioned by a group of Cisco partners found that 40% of workers haven't even heard of server or desktop virtualization.

That's problematic because public opinion and conventional wisdom often guide CEOs' and managers' decision-making. BYOD as policy only really took-off after workers demanded en masse they be allowed to use their own devices for work.

As it stands, 80% of VP and SVP level workers didn't know whether virtualization would benefit their businesses. This is troubling as professionals at these levels are the decisisonmakers in charge of implementing technologies at work.

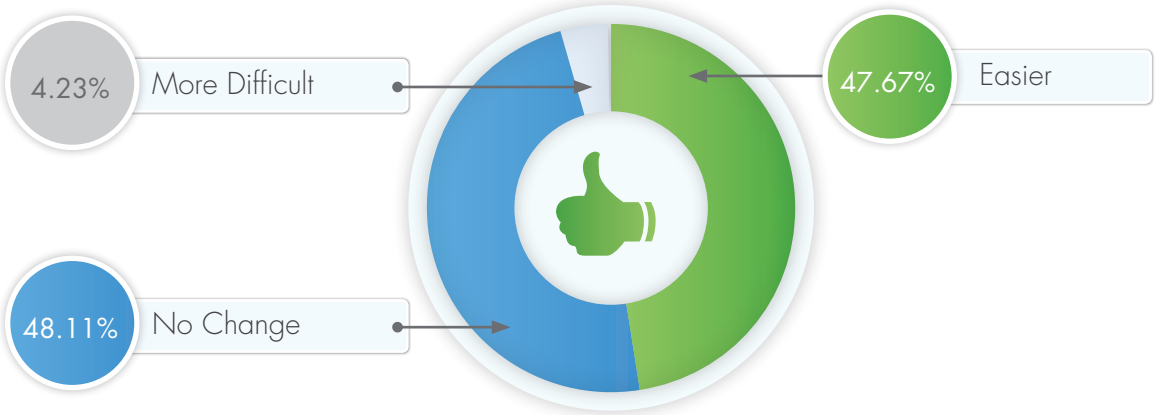
All the while, virtualization has become a watchword only in the IT industry as trends in mobility such as Bring-Your-Own-Device and tablet technology have moved the desktop away from the physical personal computer. Cloud computing has also driven the adoption of virtualization. Private Clouds are often erected on infrastructure supported by server or desktop virtualization.

Hardware has decentralized and IT managers and CIOs have sought to maintain some semblance of control of their tech environments by centralizing software deployment and infrastructure. Hosted data storage and application delivery, Cloud solutions, have become more prevalent; CIOs don't cast as skeptical an eye on the Cloud as they once did.

Neither server virtualization, which cuts down on server sprawl and juices processing power, or desktop virtualization, a technology that a huge chunk of the workforce uses, were well known among a random sampling of full-time workers.

There seems to be further a knowledge gap in understanding the benefits of virtualization: **a majority of non-IT workers** thought that remote access capabilities would not make their work any easier (53%), with 4% saying it would actually make their work more difficult. Of those who believe remote access would make their work more difficult, (how?), 54% admitted not having any knowledge of virtualization.

How would the ability to access your work desktop from another device affect the ease/difficulty of your job?



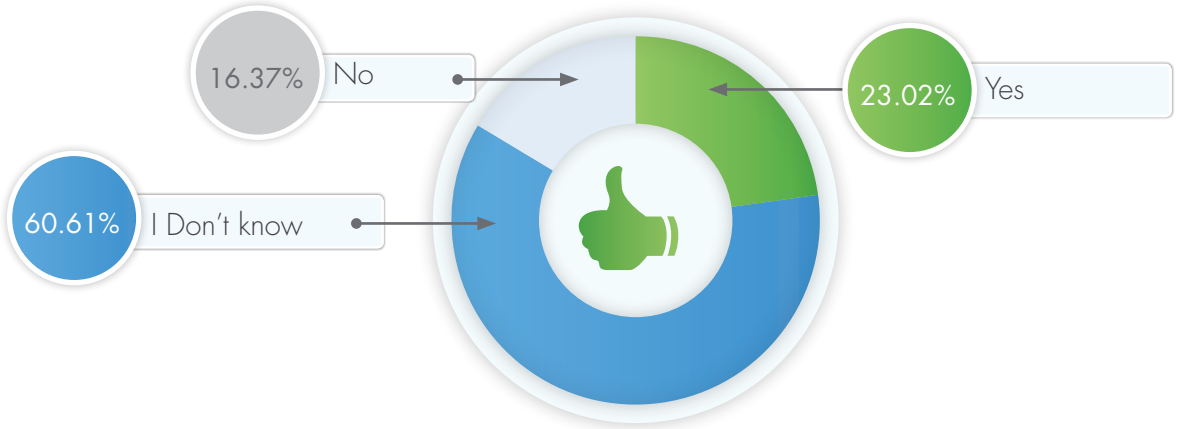
Workers with no previous knowledge of what virtualization is and what it does still take advantage of its productivity advantages.

28% of those respondents access their work desktops remotely and 40% can pull down files from their work computers from anywhere.

When respondents who had no knowledge of virtualization were asked how important the ability to access their work files and desktops remotely is, 68% responded that those functionalities were "important or very important."

General uncertainty about the benefits of virtualization is highly correlated to knowledge of what virtualization is. 61% of all respondents said they didn't know whether their work would benefit from virtualization; this number drops to 27% among those who are "very familiar" with virtualization. Among those who work in the IT industry and possess superior computer knowledge, the level of uncertainty drops to 0%.

If desktop and server virtualization are not employed at your workplace, do you feel your work would benefit from using those technologies?

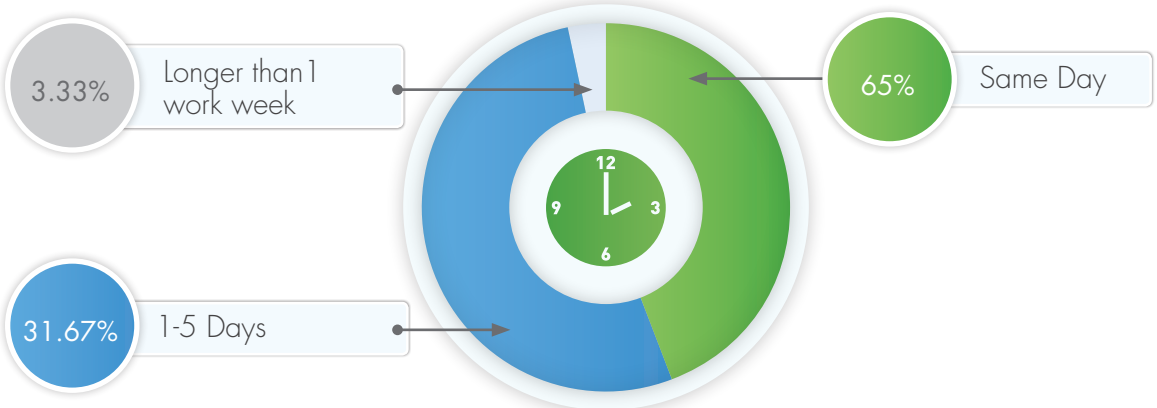


That isn't to say employees aren't benefiting from or using these technologies already.

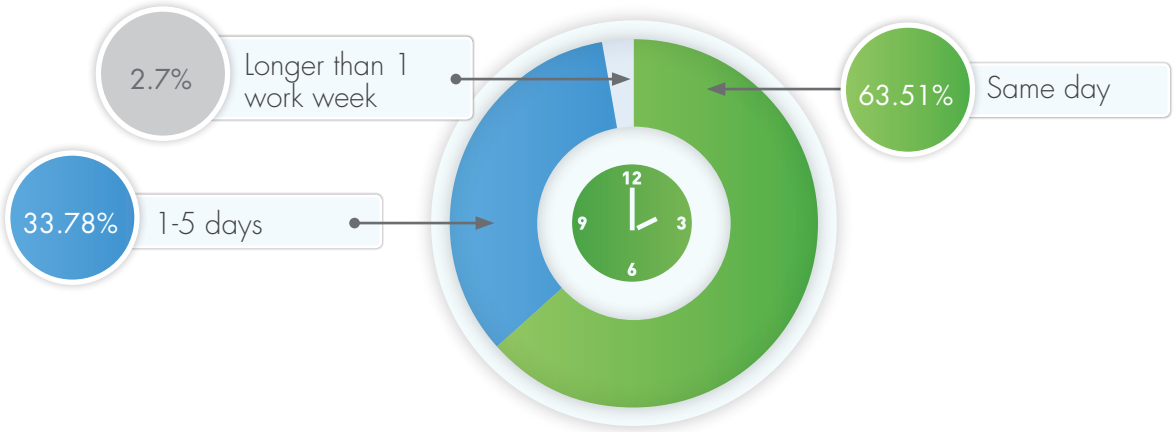
Common applications of virtualization from an everyday worker's perspective include: disaster recovery, file recovery, remote desktop and file access and software deployment.

65% of respondents who had a computer recovered after a virus reported that the process took 1 business day or less. That would indicate a fairly robust disk imaging, or more likely, Virtual Desktop infrastructure and application virtualization in their workplace.

How long did it take for your company tech support to remove a virus and restore your computer to it's original settings?

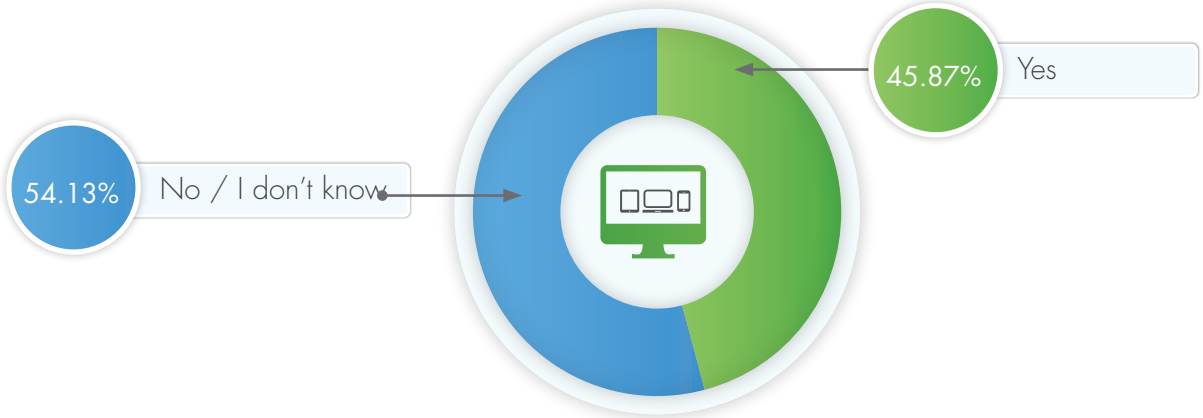


How long did recovering your files take?



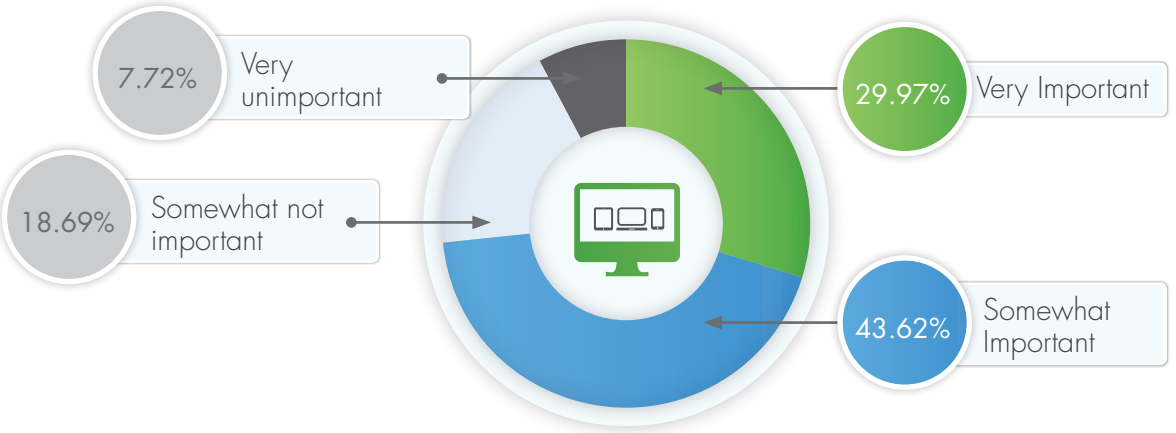
46% of respondents access their desktops remotely or from any other device– sizeable chunk. A similar percentage, 55%, can access work files from home or another device.

Can you acces your work desktop from another device (smartphone, home laptop, tablet)?



The enormous productivity benefits of virtualization are not lost on those who have access to the technologies. 74% of workers who access work files or desktops remotely said that ability was important to their jobs.

How important is it to your job that you are able to access work files from another computer or outside the office?



Conclusion

As IT managers grapple with problems such as server sprawl, BYOD security and software licensing, an empathetic and knowledgable executive will be key to begin solving these issues. The basic misunderstanding by the general public about how virtualization works and what its benefits are stands as a major hinderance to widespread adoption of server and desktop virtualization.

A technology really must attain critial mass before it takes off. Virtualization clearly hasn't reached this stage. More broadly, the risk that the technology knowledge gap will widen to the point that CIOs and IT managers operate in an arcane field that few understand– is very real.

CIOs and IT managers would be well advised to host a couple informational sessions about how the office infrastructure helps support employees.

Apendix: A Virtualization Primer

Aren't sure about virtualization yourself? Here's a quick primer taken from Cisco's research and white papers, available at Cisco.com

Desktop Virtualization

Desktop and application virtualization are software technologies that solutions providers use to help firms cut costs while improving efficiency and flexibility. With virtualization, all the different components of a computer are "virtualized" and stored on company data centers.

Users access their "desktops" via laptops or thin clients, usually nothing more than a monitor, keyboard, mouse and some basic computing hardware. The actual software running the computer resides on a data center. IT managers can control what software is deployed, what operating system each "seat" or computer has installed and what directories the user has access to. If a user's hardware is destroyed, it's a much simpler to do a full restore.

While the technology has existed for years, the latest application of desktop virtualization has been enabling remote access by smartphones, tablets and other devices.

By imprinting computers on hardware using centrally hosted software, IT managers can exercise a great deal more control over the IT ecosystem. They can shut a computer down, salvage a user's files after a malware attack or remotely deploy software.

Server virtualization

Server virtualization is a similar concept, but instead of virtualizing desktops, it's servers that are created using software. Server virtualization allows IT managers to create several servers on one piece of hardware. This allows for better scalability and speed. Companies can host their website, their CRM and their HR functions on separate "virtualized servers" while running only one physical piece of hardware. This cuts back on infrastructure costs and again gives IT managers a greater deal of control. It also cuts down substantially on the energy costs of running your server infrastructure.