

# Desktop Support Technology

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**L**ooking back on how desktop support has evolved, it's interesting to see how tools have changed. Many years ago, when we spoke of tools, we literally meant tools; in the early days, desktop support technicians were actual technicians. They had a detailed understanding of the guts of the hardware they support. They used specialized tools that were designed for repairing computers, and any good support team had all of them. In those

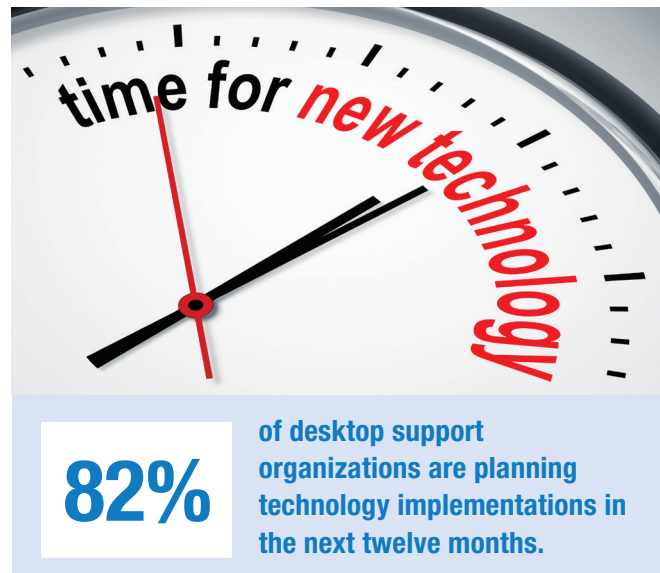
days, getting the various pieces of hardware to work together was a real challenge, and even when they were successful, it often involved making physical changes to jumpers or DIPP switches on system boards or components. And their software knowledge was intimately tied to the hardware knowledge: configuration files for the operating system needed to be tweaked, drivers had to be loaded, and testing had to be done to make sure everything was loading in the correct sequence. At this point in time, dedicated desktop support was rare, and the role often fell to those who enjoyed tinkering with hardware; it wasn't an official part of their jobs.

Over time, technology evolved and we saw the introduction of what we used to call "plug and pray." Hardware and software manufacturers meant well, and they were moving in the right direction, but the initial implementation of the "plug and play" concept often failed, and then we were right back to physical interaction. Eventually, they did get it right and, as operating systems matured, we really could just plug new components into the hardware and start playing. Operating systems still needed special care, though, and so our tools evolved from those that enabled us to physically manipulate components to software-based tools we could use to diagnose software and network problems. These early tools were crude, often homegrown or adapted from other types of software. It was during this period that the business began to recognize the importance of technology and the desktop support role began to gain formal recognition.

Fast-forward a couple of decades. Today, hardware is much more robust and reliable. Operating systems and software update and repair themselves automatically, requiring less intervention from technicians. The tools we use now are far more complex than in the past (even though they have been designed for ease of use), and they are critical technologies in their own right, with amazing feature sets that have turned technicians into technical support analysts that are highly valued by the business.

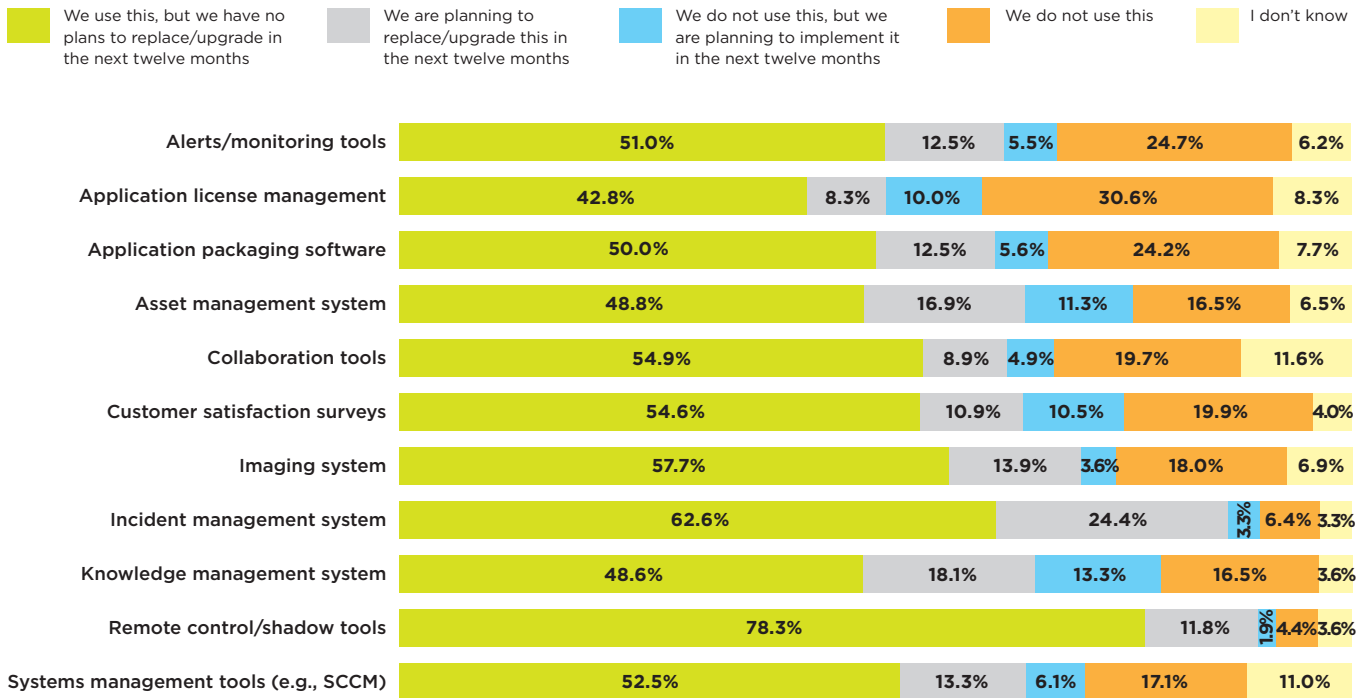
## The Survey

Desktop support teams have many different roles and responsibilities, which are usually governed by the size of the business, the type of industry, and the technologies they support. However, these differences aside, there are common technologies that have been adopted by most, if not all, organizations and are now part of their standard toolsets.



For the past few years, the HDI Desktop Support Practices & Salary Survey has collected data from organizations of various sizes in a wide range of industries. The purpose of this annual survey is to gather information that allows business and IT leaders to make informed decisions based on the current state of the desktop support industry. This brief is based on survey responses from 978 global organizations, collected between November 2012 and January 2013. The survey asks a series of questions about desktop support tools and the technologies organizations are currently using, and the resulting data has much to tell us about the state of the industry.

## Technologies used by desktop support teams



### The State of the Industry

The survey asked IT professionals to confirm the use of common tools in their environments, and there were some interesting surprises. Since all support organizations need incident management systems of some sort to track their work, we might assume that those types of tools would be the most commonly used technology in desktop support. Surprisingly, they aren't: The most popular tool currently used by most IT organizations are for remote control (90.1%).

More and more businesses today are doing business on a national or global scale, and the same technology that has simplified the global provisioning of products and services has allowed technology support staff to be located anywhere in the world. With the right tools, desktop support analysts and technicians can easily provide nearly the same level of service remotely as they previously provided in person. These tools have become very complex; some can even sustain a remote session through multiple system restarts without losing the network connection. They're also extremely adaptable, capable of providing remote support across operating systems and even on mobile and virtual devices.

Incident management systems come in just behind remote tools, at 62.6%. Organizations require their support teams to create tickets that enable leadership to track the level of work, amount of effort, and quality of customer service provided. Some systems actually allow for the integration of remote control tools, which gives organizations the ability to keep detailed logs of the work carried out by specific analysts or technicians.

Coming in at number three are imaging systems (21.6%). Installing a software image on a computer is a time-consuming and complex process. It can be done manually, but, in addition to being a needless waste of the analyst's time, that can introduce variation into the infrastructure. Imaging systems provide a means to flash a new operating system and even a standard set of applications onto a device with very little manual interaction, which ensures that the image is consistent, the appropriate operating system has been installed, and all software patches have been applied.

Knowledge management systems occupy the fourth spot (11.0%). These systems benefit not just the desktop support team but all support teams, including the service

desk, engineering, and even dedicated application support. They provide a means of gathering, cataloging, and storing critical knowledge about support operations, and they're easily searchable. For this reason, knowledge management systems can significantly reduce the amount of time analysts spend troubleshooting incidents, and, if the work and solution have already been documented in the knowledge system for easy retrieval, they can decrease time to resolution.

Rounding out the list of the top five tools are system management tools (65.8%). These tools allow organizations to centralize control over large numbers of computers, push out patches and updates, and manage assets across an entire enterprise.

When asked to identify the most common motivating factor for implementing new, or upgrading current technology, most organizations cited continual process improvement (61%), and, when we look at the top five, it's easy to see why. Each technology in the top five provides significant benefits by enabling organizations to improve existing processes. Remote tools eliminate the need to collocate support staff at every business location; incident management tools give leadership metrics and measures for the support team; imaging systems save huge amounts of time and effort and provide a consistent environment. Knowledge management tools make sharing information more efficient, and allow support to quickly get to the root cause of a problem. System management tools provide a means of monitoring, tracking, and managing large groups of assets, so support avoids dealing with patching or operating system issues one at a time.

Following closely on the heels of continuous process improvement was the desire to improve customer experience (60.1%). This is actually related to process improvement, because satisfied customers are the basic foundation of any process improvement method. In fact, a growing trend in technology support is the customer experience, as reflected in an up-and-coming metric known as the Customer Experience Score (CES). The other driving factors in the top five are lifecycle replacements (39.7%), expanded services (39.2%), and cost (38%).

Outside influences can also have an effect on the tools a support team selects. It's probably not surprising that the most common influence on tool selection is ITIL (60.8%). Since many organizations adopt at least portions of the ITIL approach to infrastructure support, it stands to reason that they would look at their tools through the ITIL lens. But there are other influences on tool selection, including the HDI Support Center Certification (17.6%),

Knowledge-Centered Support (10.8%), other process improvement methodologies, such as Six Sigma, Lean, or TQM, and industry standards like ISO.

The survey also asked respondents to identify the tools they felt were the keys to providing successful desktop support. Of the top five, four should be pretty familiar: remote control tools occupy the top spot (78%), with incident management tools coming in slightly behind (76.6%). Knowledge management systems were next (53.2%), and, again, these systems have value for all support teams: desktop support team can provide knowledge that will enable the service desk to resolve issues at the first contact; engineering and software application teams can provide knowledge for desktop support so they can quickly identify and resolve known problems. In fact, in some organizations new hardware or software can't even be introduced into the production environment unless there is knowledge available to support it.



**For desktop support, remote support tools have been voted the most important technology for supporting end users.**

System management tools also appear in the top five (43%). These tools facilitate quick and easy management of large numbers of workstations, as well as quick and easy installation of operating system and software patches, which ensures that the environment remains stable and consistent. These activities often take place in the background or after-hours, to minimize interruption to the business.

Alerts and monitoring tools are the only tool that didn't appear on the previous top-five list, and they came in fourth on this list (45.3%). These tools give support organization the means to proactively respond to trends

and issues that arise in the infrastructure. Using these tools, support organizations can set thresholds for anything from incident ticket volume to hardware-specific issues like CPU utilization. When those thresholds are met, the system alerts the appropriate support team. In situations where the monitoring tool is integrated into the incident management system, alerts can be generated automatically.

All of these tools are important, so much so that most are hosted on in-house servers; nearly every tool came in over 80 percent. Customer satisfaction surveys were the only exception. These tools are often hosted on third-party servers; only 65.5 percent run them on in-house servers. Others prefer managed services (16.1%) or web-based providers (16%).

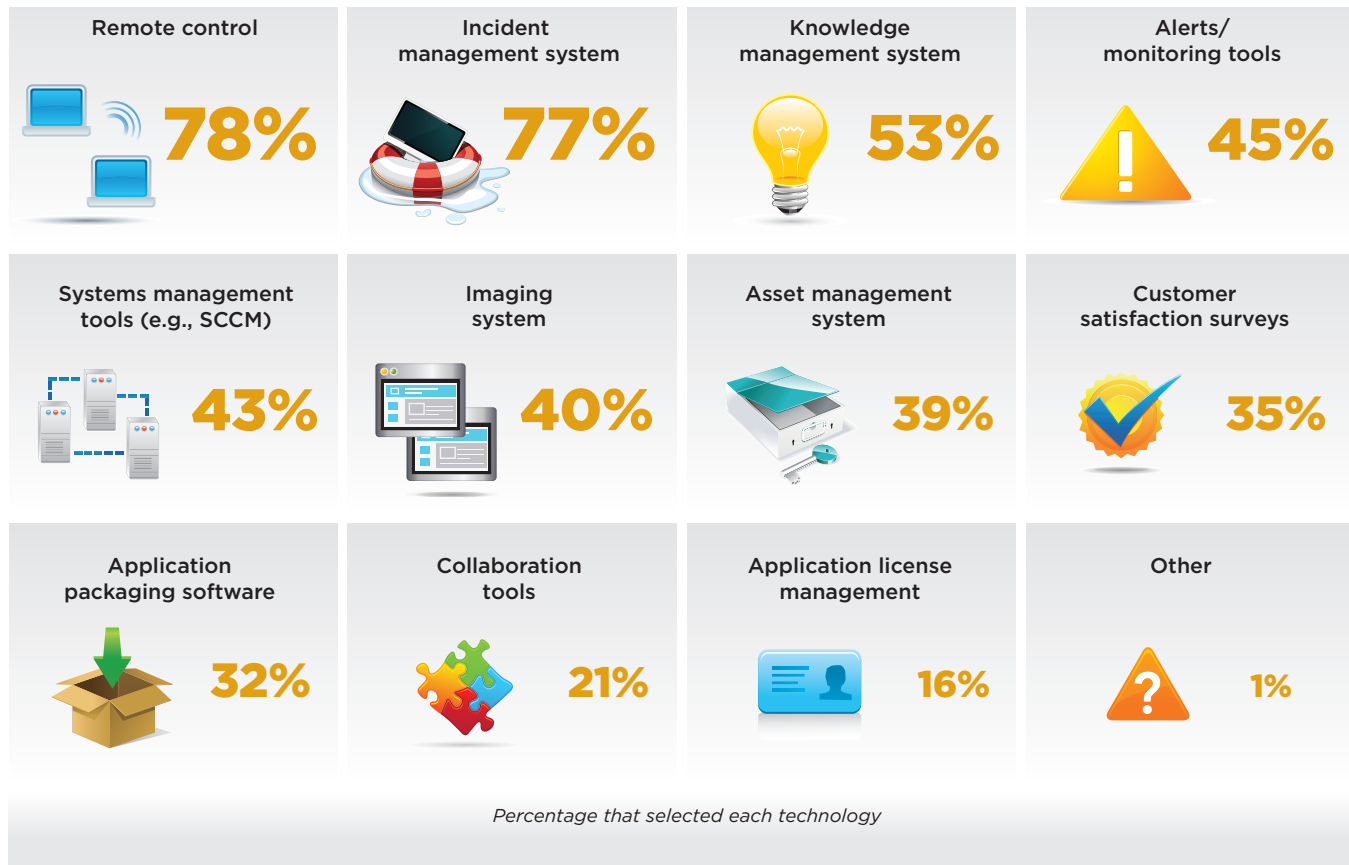
Licensing is a related issue. Most commonly, organizations favor a renewable subscription approach for each technology, instead of a one-time purchase for life. The only exception to this is imaging systems; imaging systems are more commonly licensed as a one-time

purchase for life, either with or without maintenance included in the license.

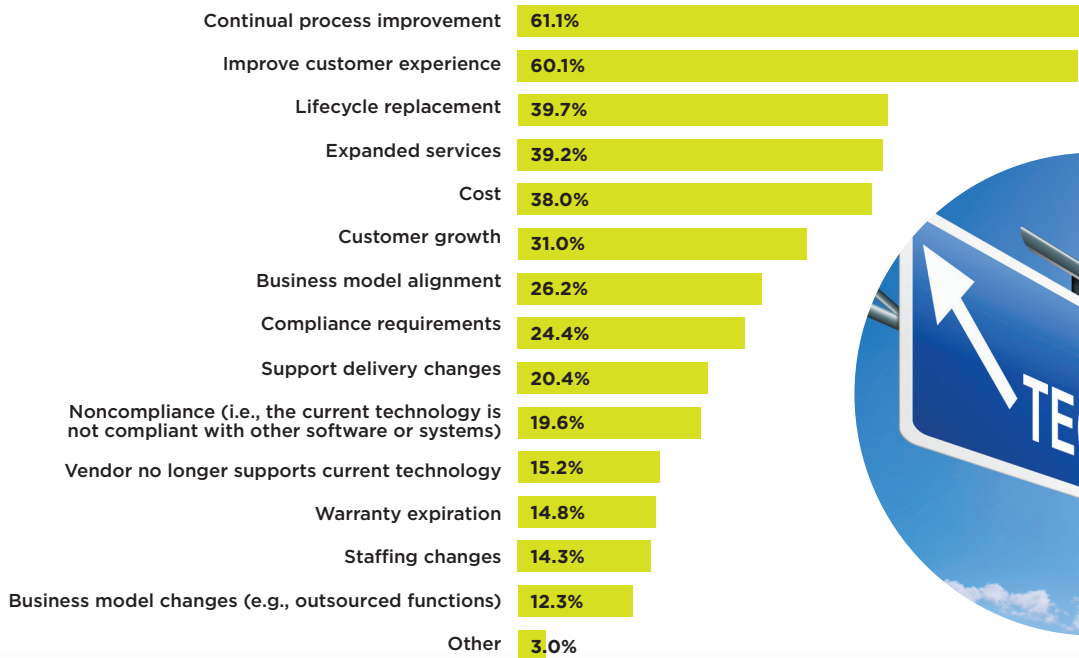
Not surprisingly, the survey results revealed that desktop support teams are not always aware of their technologies' licensing. Many (greater than 20%), across the board, reported that they did not know what licensing model was used for each technology. Software licensing is often handled outside of technology support. The support team may be responsible for installing and fixing software, but they may not necessarily be accountable for procurement and licensing.

As the IT support structure becomes more streamlined, it's increasingly important that support teams share the same tools. This is logical, since the service desk will often assign incidents to other support teams when they can't resolve an issue during the initial call. And the survey bears this out, as 90.8% of organizations use shared ticketing systems. Remote tools are seeing a similar surge in use across teams, as they make the workflow much more efficient. The overall working environment is much

## Must-have technologies required to provide successful end-user desktop support



Factors motivating technology upgrades and implementations



Percentage that selected each factor



better when all of the support teams are familiar with and share the same technology.

Virtual Environments

As technology continues to evolve, it's inevitable that support teams will need to provide support of some kind for virtual environments. The discussions about whether we will or will not support virtual environments are a thing of the past; today, they're in regular use across a wide range of business and industries. As infrastructures become more robust, we'll likely continue to see not only increasing numbers of virtual desktops and servers but also an expanded use of this type of technology across different types of business functions. Virtual applications are already very common, with browser-based software taking precedence over traditionally installed executables in many environments. Support professionals are preparing for this new way

of doing business. Indeed, the survey shows that in most cases, we're already providing a significant level of support: 77 percent are currently supporting virtual applications, 72.7 percent are currently supporting virtual desktops, and 89.2 percent are currently supporting users on virtual servers. Desktop support professionals are uniquely positioned for this role, because they typically have a good understanding of how the business operates as well as proven troubleshooting skills.

Conclusion

Today's support teams have access to amazing levels of technology. Regardless of industry, business, or size of organization, these tools make the work we do easier, more efficient, and more consistent. As technology evolves, it's critical that our tools evolve to cope with changes now and in the future.

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