

Delivering The On-Site Experience Remotely

Best Practices for Delivering Remote Support from IT Help Desks

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- *Phone tag*
- *Error-prone*
- *Frustrating*
- *Longer time to relief*

Before Remote Access

The finance system's not working, and it's your neck on the line. IT did some kind of database upgrade they said wouldn't make any difference, but it must have changed something important. You call the help desk and wait on hold while your boss pokes his head in your cube for the third time in the last half hour.

You finally get through to the help desk agent. He confirms that IT's data base changes could result in exactly the error your seeing. Unfortunately, to get to the bottom of the problem, he's going to have to get a bunch of configuration files and settings from your system to try to replicate the error on his machine. "Take careful notes," he says. "The procedures for getting the information I need are a little tricky, and I need to get it all before I can start debugging. Ready? First right click on 'Properties,' then find the 'Advanced' tab, then..."

Ten minutes later, you screen is full of notes telling you how to get all the information he needs, and he's promised to call you just as soon as he gets your email with all the settings. You work through arcane menus you get the feeling you were never meant to never see. A half hour later, you send him an email with many attachments and sit looking expectantly at the phone. Your boss comes in and gives you an odd look before moving on.

Twenty minutes later, the phone rings again—seeing the help desk extension, you answer it immediately. "Whoops!" the agent starts. "We forgot about the database DLL versions. I'll need those, too, to recreate your system. Ready to take more notes?" You sit back in your chair, increasingly certain that the quarter-end reports won't be ready for the executives tomorrow...

With Remote Access

The finance system's not working, and it's your neck on the line. IT did some kind of database upgrade they said wouldn't make any difference, but it must have changed something important. You call the help desk and are surprised when you ring right through. Your boss pokes his head in your cube and nods, pleased that you're working the issue already.

The help desk agent confirms that IT's misguided database changes could result in exactly the error you're seeing. "Let's take a look," she says. "Do you mind if I see what's on your screen? Even though we're located two time zones and many WAN gateways apart, I can take care of this from right here." You click the "OK" button on your screen to authorize sharing.

She asks you to look at a few things for her and then says, "It might be quicker if I drive. You watch while I explain what I'm doing, in case you ever need to look at this stuff again." You click "OK" again and look at your screen, encouraged and interested, as the help desk agent steps you through her debugging process and figures out the exact configuration change that's needed.

"Well, it looks like that's all taken care of. Anything else I can help you with today?"

You sit back, relieved, and then stand up to tell your boss that the reports are printing.

- *Closed at first call*
- *Instructional*
- *Satisfying*
- *Shorter time to relief*

Executive Summary

“The reaction to using [remote support] has been very positive: it’s as close as you can get to having someone come out to your desk and help you. The people we support sense that. It’s the next best thing being there.”

– Manager, Hardware and Software Support

Help desks are increasingly global in scope. According to recent data from the Help Desk Institute, fewer than 18% of enterprise support organizations support a local site only, and over 30% have a charter they describe as “worldwide” or “global.” Knowledge workers and other enterprise staff—including help desk professionals—are distributed in other ways as well, with contract or contingency workers, mobile workers, home and drop-in center workers, and outsourced staff mixed in with traditional workers in cubicles or offices.

The evolution of the global distributed help desk is driving a sweeping change in how enterprise support is delivered. Help desk and enterprise support staff can no longer count on being close to the people and systems they support. And this makes the business of enterprise support harder: help desks in remote centers have to work through end-user intermediaries. While some of these users are quite skilled, it is never quite the same as working on the systems in person. Resolutions simply take longer.

So, it’s no surprise that help desks were among the first to try to repurpose their IT colleagues’ remote management tools such as pcAnywhere for remote support. But these stopgap measures are cumbersome, less secure, and don’t scale across the heterogeneous network environment that is deployed in today’s enterprises.

Internet-Based Remote Support To The Rescue

In recent years, a new breed of remote support has become available and is being rapidly adopted in enterprise support centers—the Help Desk Institute reports in its 2004 Practices Survey that 75% of help desks use remote management, the most highly adopted of any of the 26 technologies covered in their survey. Internet remote support provides the next best thing to being there in person, letting agents virtually sit next to users, see what’s on their screens, and take over if appropriate. They make it easy to upload and download files to diagnose and resolve issues. And their architecture lets them do this in a way that’s secure, under the user’s control, fast, and scalable. They don’t require time-consuming or undesired software installations on the remote machine. They make it easy to set up a connection, no matter how the computers are connected to the corporate network.

The results are dramatic:

- **Faster time to resolution**, as phone tag and data gathering steps are eliminated, and more issues are resolved at first contact.
- **Higher help desk productivity**, as agents can work directly on the system, see exactly what’s happening, and not need to recreate user environments on lab computers.
- **Better root cause analysis**, as IT staff can see defects exactly as they present themselves at user sites.
- **Training as a byproduct of support**, as users watch, learn and duplicate expert resolution processes.
- **Higher satisfaction** as a natural side effect of faster, more accurate, and more transparent resolutions.

As support centers have deployed this new generation of remote support solutions, they have developed a series of best practices for maximizing their benefits. Based on market research performed in late 2004 and 2005, this white paper summarizes these best practices, illustrates the benefits, and suggests considerations for selecting the remote access solution that will be most effective for your enterprise.

The Remote Access Opportunity

The Challenge of Remote Support

“Users unintentionally lie to us, because they don’t understand the questions we’re asking. In complex support, we really need to see what’s going on.

– Manager, Support Tools

Over the past few decades, on-site IT support has gradually been replaced by the remote help desk, which has itself evolved to the multichannel enterprise support contact center.

This is a natural outgrowth of the personal computer and Web revolutions, which deliver increasingly sophisticated computing with off-the-shelf desktops and servers. Unlike the mainframe days of old, when lab coat-wearing support experts were as much a part of a hardware installation as raised floors and disk farms, today’s complexity lies in highly configurable integrated application suites. The complexity has migrated from hardware to software.

As computer scientists are prone to say, the only difference between software and hardware is that you can send software over a phone line. And so, as complexity moved into the software, it naturally occurred to the help desk to provide support over a phone line, too. This translated into much lower costs and much higher scale for enterprise support.

But remote support has its drawbacks. Field service technicians were right there: they could listen to disk drive bearings, smell fusing components, and, most importantly, sit at the console and do what they needed to do to diagnose and repair their systems. In contrast, remote help desk agents found themselves having to work blind, like an air traffic control center talking an untrained pilot in for a landing. When users are less technical, agent and user alike were even more frustrated and less likely to successfully resolve the issue.

The remote support model provided efficiency, but made it much harder to provide fast and accurate resolutions. Clearly the market needed the efficiency of the centralized support center with the immediacy of field service.

First Steps to Remote Access

“It used to take literally hours to remote connect, from setting up a modem, opening holes in the firewall, installing pcAnywhere, etc. There were ways of doing it, but it was difficult and time consuming.”

– Manager, Support Tools

The first relief from the challenges of supporting products remotely came from a surprising source: IT server management. People running racks of PC-based servers needed a way to log in to them and manage them without having a separate screen for each PC—as a matter of fact, without leaving their desks. This need was intensified by the GUI nature of these PC server environments: no longer could the IT user simply have a command line connection to their servers—they needed to see what was on the “screen,” even if the machine didn’t have one. As a result, a series of utilities were developed to allow one computer’s screen to be displayed in a window on another computer, the most widely adopted of which was pcAnywhere.

Help desks immediately started using these applications to see what their users were seeing. While they did help, they did so in a way that wasn’t scalable, efficient, or secure. This is because these products were designed to be used inside a single local area network (LAN)—from an IT staff member’s PC to a server. This architecture resulted in serious issues when used for enterprise support:

- 1 **User-side footprint.** Applications like pcAnywhere required users to install software on their systems to allow the agent to connect. At best, this was a time consuming step; at worst, this was impossible because of locked down machines and IT policies designed to manage configurations and avoid malware. The last thing help desks wanted was another piece of software on user computers.
- 2 **Performance requirements.** Being designed to work over a high-speed LAN, legacy systems assume levels of bandwidth and connection reliability that is not universally found across the virtual enterprise WAN. As a result, they often drop connections and provide frustratingly slow screen refreshes.
- 3 **Holes in the firewall.** Perhaps the most significant drawback of being designed to work on a closed connection is these systems they communicate over proprietary ports—ports that aren't generally open in security-conscious networks. For traditional office-based staff, this may not be a problem, but for the increasingly distributed, mobile, and outsourced workforce, it's a major issue. As a result, these legacy remote access solutions require IT to open holes in the firewall, an action they're loath to take.

As employees increasingly work in disparate locations—distributed work environments, home offices, on the road, through wireless, and so on—legacy LAN-based approaches to remote access aren't a practical approach to delivering support. A new solution, architected for the distributed enterprise, is required.

The Internet-Based Remote Access Revolution

"In the 1990s, companies would look for some way to see what was happening in an organization. Those were the days of pcAnywhere and solutions like that...but, there was no universal tool to use in all cases with everyone. I needed a universal remote access solution."

– Director, Support

Given the clear demand for scalable, high-performance, and secure remote access solutions that are at home in the chaos of connections that make up today's enterprise, vendors are now delivering a new class of internet-based remote access solutions for enterprise support. As Gartner describes the space, "an emerging alternative exists in Web-based, browser controlled sessions for one-to-one or one-to-many sessions."

Unlike LAN-based legacy solutions, internet-based solutions are:

- **Browser-based.** This means they communicate over standard secure web ports that are already open in the firewall. It also means that no application needs to be downloaded to the machine receiving support.
- **High-performance.** Taking bandwidth in sips rather than gulps, by using smarter algorithms for packaging and sharing data, internet-based solutions are not only faster over any kind of network but also more resilient to packet loss, temporary loss of connections, and the other realities of today's enterprise networks.
- **Secure.** Using the same secure web protocols that drive billions of dollars of financial transactions and internet-based Virtual Private Networks (VPNs), internet-based remote access solutions are secure, permissions-based, and give granular control over the level of access the supported system provides.

They become, in effect, a universal remote access solution that allows help desk staff to be virtually next to all of their users, regardless of where they are located.

Today's Market for Internet Remote Access

"Why did I consider a remote support solution? Survival, mostly...it's pretty much impossible to do what we do without it."

– Director, Support

Given the market demand for practical remote access solutions, it's no surprise that the market has established itself quickly:

- The Help Desk Institute (HDI) reports that 20% of help desks plan to buy a new or replacement remote access solution in the next year.
- Gartner notes that the overall market for collaboration solutions, including remote support, will exceed \$1B of new license sales by 2008.
- Gartner also estimates the overall market for collaborative solutions is growing at a compound annual growth rate of over 17%—a standout in today's high-tech economy.

A quick Google search on Remote Support will return tens of companies offering products in the space; analysts peg WebEx in the number one position.

The Business Case for Remote Access

“We haven’t missed an SLA in two years. Remote support is a big part of that.”

– Manager, Support Tools

The business case for remote access is based on its ability to make resolution faster and more accurate. Fast and accurate resolution increases satisfaction. It also takes less time from help desk staff, increasing their productivity and support center efficiency. And, a key source of value is the ability to drive to resolution over the course of a single, interactive session. By avoiding the telephone tag frequently required by complex diagnostic processes where settings and logfiles are gathered, sent to the help desk, and then used to replicate an environment there, an incident that might have taken days of email and phone sessions to resolve can often be closed in real time.

Reduced Support Costs through Increased Productivity

“On typical highly complex cases we deal with, we can move from 2 or 2 ½ hours to about 35 minutes...at today’s run rate of 1200 sessions per month, this translates to an annual savings of nearly \$600,000 and an ROI in excess of 700%.”

– Manager, Support Tools

“In the first year, the issues that were taking four hours of analyst effort were now taking 20 minutes.”

– Director, Support

According to research by the Service and Support Professionals Association, over 80% of the cost of support is consumed in actually resolving issues—and even more for complex issues that extend past the first contact. As IT departments find their budgets increasingly squeezed, the single highest leverage action they can take is making their help desks more efficient.

Listening to support calls, one is struck by how much of the time spent on the phone is taken up with understanding the problem statement, getting the exact error message, getting configuration information, and then guiding people to apply the fix correctly. And a huge driver of off-the-phone time is spent in the lab, attempting to recreate the problem presented by the user.

Because remote support allows the help desk to see what’s happening first hand and take corrective action, the time spent on the phone can be shortened dramatically. And because the work is done on the machine with the problem, time is saved in the lab—and in tracking down the differences between the lab and user environment.

The result is a sizable fraction of calls that take far less effort, freeing help desk staff for other issues.

Reduced Time to Resolution

“It’s faster to use [the user’s system], not duplicate it...The engineers are saying that calls that took one or two weeks, elapsed, now take 30 minutes. We take out the phone tag, the email tag, and the turn around time, and just have the actual resolution time.”

– Manager, Hardware and Software Support

“We saw a 50% reduction in average close time in just a few months.”

– Coordinator, Support

All help desks track time to close, and most pay attention to aging incidents. In some cases, long times to close happen for the “right” reasons—problems are very hard, or vendor engagement is required. But in other cases, long times to close are a function of users who are hard to contact, resulting in phone tag and delays in taking the next step in the resolution process.

Because internet-based remote support eliminates many causes of phone tag, it makes it more likely that resolution will be reached in a single interaction—or at least in fewer iterations. This means that, especially for those users who are hardest to reach, time to close can go down dramatically.

In addition to increasing satisfaction, shortening close times reduces the number of incidents that require costly management attention or time-triggered escalations. It also helps IT organizations meet their operational metric objectives and their SLAs.

Increased Satisfaction

“Before, it would take a day or a couple of days to help users. But they needed help right away. So, the top level driver for remote access was satisfaction via a timely resolution of the problem. Cost savings was a nice second benefit...Our satisfaction scores have gone up by 12%.”

– Coordinator, Support

If users had their way, they’d never talk with anyone in the help desk: their systems would just work and it would be obvious how to use them. If they do have to talk with the help desk, they’re already frustrated—frustrated with the problem, frustrated with being on hold, frustrated from failed self-service attempts, and perhaps even frustrated with themselves for not being able to solve their own problems.

The last thing they need is more frustration. They just want a fast and accurate resolution.

But consider what generally happens next in enterprise support:

1. Users have to explain their situation, often to several different people
2. They get assigned “homework:” gathering up configuration files and data on behalf of the help desk
3. They have to wait for a call or an email back while the agent works through all the information

If the user-provided data is wrong or incomplete (and it often is, despite the best of intentions), then accurate resolutions are hard to come by. In any event, the phone tag and back and forth conversations take time. In short, the last thing their resolution is likely to be is fast and accurate.

With remote support, the situation is different. Users can show, not tell, which is much easier and less threatening. The help desk agent has to do the “homework.” And issues are more likely resolved during a single call.

The result is that remote support users have higher satisfaction. Because of the increased transparency of remote support—the user sees exactly what the agent is doing—there’s a greater comfort level with the value of the help desk. And help desks with higher perceived value are less likely to be outsourced.

Best Practices for Using Remote Access

We have seen the market imperatives for internet-based remote access in enterprise support and its success in the market. We've also examined the key ROI factors for remote access solutions. Based on the successful adoptions across the industry, we'll review the best practices that have emerged for maximizing the business benefits of remote access.

Gaining Acceptance From your Technical Support Team

"We've rolled out a number of different technologies over the years. There's always some growing pain—analysts don't immediately see the benefit. Remote access was different: there was an immediate impact, so this was the easiest adoption we've ever had."

– Manager, Escalation Team

"Once analysts start using it, it's a tool in their tool bag and they don't want to give it up."

– Director, Support

Often tool initiatives for the help desk seem to consider every stakeholder but the actual user! Cost reductions, user satisfaction, average handle times, IT requirements, and more are considered, but usability and fit with the agent's workflow are sometimes ignored. When the finding comes back that "they're just not using it," management shows its whip hand and resorts to threats. But browbeating already-pressured agents into using tools that don't seem designed for their needs makes a bad situation worse, and the initiative's inevitable failure is blamed on technology, stubborn staff, and anything but the real culprit: lack of effective change management.

Here are proven approaches for encouraging help desk acceptance:

1. **Involve agents in the planning process.** Help desk agents have a lot of windows open on their screens today, and they're not going to assume that adding another one is in their best interest. By including agents in the planning process for a remote support effort, you'll make sure their concerns and needs are addressed in the project. You'll also capture some of the best sources of insight about what will and won't work during real calls with real users. Finally, you'll have created ownership and buy-in: remote support won't be something that "they" are foisting on "us."
2. **Grow the ranks by invitation, not fiat.** Although you can be more subtle than Tom Sawyer was in getting his friends to paint his fence, it's always better to encourage people to opt-in to a program rather than to order them to start using a tool. The excitement a by-invitation-only core team can generate, and the excitement of being an "insider" will encourage others to want to be part of the next wave of the roll-out.
3. **Consider WIIFM.** When talking with agents about remote access technology, remember that everyone wonders "What's In It For Me?" Lower average handle times or time to close are important to agents, but on a personal note they'll care more about being able to look smart and effective for their users and avoiding the frustration that comes when users can't give them the information they need to do their jobs.
4. **Find and persuade the influencers.** Every help desk has its informal influencers: experts whose opinions on tools (and most everything else) are respected by the rest of the organization. These are the people who may be most concerned about change. Making a special effort to reach out to show how remote access makes them more effective, but doesn't diminish the importance of their skills and expertise, is critical to avoiding a silent rebellion.
5. **Celebrate the wins.** When remote access helps agents and users, make sure that everyone knows. We learn and are persuaded more by stories than by facts; good experiences make compelling stories that can make the benefits of remote support real to others. Invite agents who have had effective sessions to tell the rest of the organization about it in what ever forum suits their styles and the organizational culture best.

Gaining Acceptance From your Users

“They ask for it by name. ‘Can’t you WebEx? We don’t have much time.’”

– Director, Support

In general, users who are calling the help desk are in pain. This means that their willingness to try techniques that will lead to a resolution is high.

Still, it helps to have set end-user expectations before the “OK to start sharing?” button appears on their screen. Help desks organizations should:

1. **Publicize the benefits of remote support in advance.** Before the first remote session starts, let users know what it is, what’s in it for them, and where they can find more information. Give them the opportunity to discuss concerns before they’re on a call. This can be done through company newsletters, all-hands meetings, or the help desk intranet.
2. **Prepare agents to answer questions and deflect objections.** Help desk agents need materials to help them explain the benefits to users and overcome likely concerns about security, privacy, and changes in the resolution process. Agents should be coached to answer questions based on their needs and interests (“we’ll waste less of your time”) and not their own (“I don’t have to wait for you to look things up for me.”)
3. **Be crystal clear about the opt-in nature of remote support.** Help desks should make sure users understand that remote support is an option, not a requirement, and that they only need to grant specific rights for specific applications—it’s all under their control.
4. **Coordinate with the right people elsewhere in IT.** Remote support vendors should provide customers with a white papers that can be used to discuss and coordinate remote support plans with security and network specialists in the IT department.
5. **Use remote support only when it’s most effective.** Although users who have experienced remote support might want to use it in all cases, help desks should carefully evaluate when and how it’s used. If two or three simple questions are all that’s needed, the overhead and cost of setting up a remote session isn’t justified. By using remote support only when it’s the smart thing to do, help desks raise its value to the rest of the enterprise.

Problem Management

“Session recording is very beneficial if we’re dealing with a possible defect that we can’t duplicate...You now have a template for a possible problem...We’re getting more requests from Development to set up a remote access session, if there’s an escalation.”

– Manager, Escalation Team

An important part of implementing ITIL practices throughout the IT department is problem management: understanding and eliminating the root causes of incidents. This root cause analysis can be one of the most time-consuming tasks for help desks. Recreating a problem on a lab system can be a laborious process, and sometimes isn’t even possible. Yet, IT and vendor professionals groups need to see the problem at work before they can eliminate it.

Advanced internet-based remote support solutions have a special feature that can avoid this problem: session recording. If a problem exists on a user system, the agent can explore that system with the user and record the session, providing a nearly painless way to give IT developers the information they need.

Integrating Remote Support in the Workflow

“We’ve integrated remote access into our electronic support channel—it’s literally three clicks to get connected. This can happen in less than a minute.”

– Manager, Support Tools

Experience has shown that support tools that aren’t seamlessly integrated into the user’s help desk experience are rarely used. Remote support should be integrated with:

- **Help desk incident management system, the asset management system, and the enterprise directory.** The help desk should be able to launch a remote session directly from the employee and asset data without retyping any information.
- **Electronic incident workflow.** If the user can log an incident on the intranet, that incident should also allow agents to launch an immediate session.
- **The knowledge base.** If a user support interaction results in knowledge that should be captured in the knowledge base, then the remote session should be saved as a way to jump-start the knowledge creation process. In some cases, sessions can themselves because multimedia components of knowledge.

Training in the Support Process

“Remote access sessions are also a training opportunity for teaching people how to debug.”

– Manager, Support Tools

In the same vein, help desks should realize that each remote access interaction is a training opportunity—a way to show users how to solve their own problems and do more with their IT environment. Some people learn better by hearing things, others by seeing, but all learn best when the experience combines seeing and hearing and participating, as happens in remote support.

Driving Self-Service by Example

“We expected we could drive self-service by showing users how to do it when they called, but we expected we’d have to invest a little extra in those calls. We were right about driving self-service, but in fact the users’ being able to see the screen shortened the calls.”

– Director, Technical Support Group

Over 50% of help desks have deployed self-service web sites, but they often find themselves at a loss when it comes to driving their adoption. Some enterprise support leaders are having great success in driving self-service by showing users how it works when resolving their incidents. Turning around the normal remote access paradigm, the help desk agent shares his or her web browser with the end user. (Internet-based remote access makes it easy to do this, since it’s all browser based—no software installation is required.) The agent then goes to the self-service site and shows the user how to resolve the issue using on-line resources. The user leaves with a new competence—and confidence—in the self-service tools.

One organization that tried this expected call handle times to go up with this approach, but assumed the investment would be worth it in the long run as self-service adoption increased. They were surprised to see that, in fact, call times went down! As users could see the information on the agent’s screen, they were triggered to collaboratively solve the problems with the agent.

Considerations For Selecting a Remote Access Partner

Once you have decided that an internet-based remote access solution is the right approach, it's important to assess your goals to select the right vendor from the many that are out there. Among other considerations not listed below is whether your preference is for a hosted or a licensed technology provider. Licenses are appealing from a perceived security standpoint, especially for companies with sophisticated IT departments, but be aware of the costs of running highly available worldwide network operations from within your own IT environment.

Privacy and Compliance

"It's technology that's secure and the end user is in complete control."

– Manager, Support Tools

The more assurances you can provide to users being supported that their privacy is respected and maintained, the easier it is to get them to adopt remote support. Key factors to consider:

1. **Fine-grain control.** Does the user have the option to grant or restrict specific permissions, such as viewing an application or operating an application? Can the user share only specific applications while keeping other activities on the screen private? This level of explicit control reassures users.
2. **Thin client.** Does the application require a troublesome installation on the user's machine, or can they simply open a web browser and start sharing their system? Downloaded applications raise concerns about privacy, especially in this day of tighter enterprise control over computer usage.
3. **Encryption.** Does the system use certified encryption to ensure the privacy of the data across the network? Is it encrypted at every stage from the desktop to the help desk?

Performance

"Over low bandwidth connections, such as ISDN, our old solution would sometimes just drop the connection or freeze. [Our internet-based remote access solution] works well with low bandwidth—really great."

– Manager, Technical Support

Today's distributed work environments provide a challenge for streaming media, as anyone who has streamed video can attest: sometimes it works great, and sometimes it doesn't.

A remote access solution should work well in low and high-bandwidth environments, not falling over when run across dial-up lines, high latency two-way satellite links, wireless LANs or WANs, or simply congested Internet links. It should provide good screen refresh rates, and not hang when packets are momentarily delayed.

File Transfer Capabilities

"We also use the file transfer capabilities as a more secure way of delivering files. Some of our users can't go to an FTP site or open an email attachment. It works great."

– Manager, Escalation Team

Once a user problem has been diagnosed, it's common that the resolution includes moving configuration, data, or executable files to their machine. Many help desks use email today, which has some serious restrictions: it doesn't support complex file transfers with many files going in many locations; it requires the user to distribute the files; and it's not auditable.

Enterprise support organizations should consider a secure, auditable, and highly flexible file transfer utility to be a key functional component of a remote access solution, and should make sure that users and agents are comfortable using it. Remote file management substantially extends the benefits of remote access.

Unattended and Administrator Access

"We needed something that would install easily without any user interaction. We didn't want to require someone to push 'next,' 'next,' to install something to give us access."

– Manager, Technical Support

Enterprises support systems that aren't on anyone's desktop: servers, conference room computers, shared computers, point of sale systems, kiosks, and more. For these computers, it's important that help desk staff have unfettered access to do what they need to do without having anyone be there to install a client or confirm an operation.

Additionally, sometimes help desk staff need to be able to log in to a computer as a special user, such as an Administrator, to accomplish their tasks. This presents two challenges: first, the user at the computer may not be able to log in as this special user; and secondly, the local user would prefer not to log off to allow the help desk to log in.

This means that the system must have the ability to allow help desk staff to log into a user's computer as a different user without logging the first user out.

Both of these requirements raise the bar on security and auditability requirements: staff should have unattended access to designated computers only, and all actions, especially those undertaken while logged in as a special user, should be logged and audited for security and compliance.

Certified Security

"There's no Internet traffic going in, unlike the traditional remote control system. The old model is that the engineer is going through a hole in the firewall. [Internet-based remote access] solutions are a completely different paradigm, where the user is in charge. The user initiates everything."

– Manager, Technical Support

When evaluating the security of an internet-based remote access solution, the following factors should be considered:

1. **No direct connection.** In a highly secure solution, there is no direct connection between the help desk and the user machine. This is important, because a direct machine-to-machine connection is easier to hijack. The most secure solution is to have each machine initiate a session with a common set of network services in a physically and logically secure location, and to have those services intermediate interaction between the two machines.
2. **Opt-in only.** Users should have explicit control over each action and privilege that is granted to help desk agents, with clear and intuitive messages explaining what rights they're providing. If a particular user doesn't feel good about having a particular executable file placed on a machine, he or she should be able to block it without losing the other benefits of the session.
3. **Strong encryption.** Encryption should be at least 128 bits for practical insurance against cracking. A standard such as Secure Sockets Layer (SSL) should be used so that the protection afforded by the encryption is broadly understood.
4. **Industry certifications.** Enterprises should look to certifying bodies such as WebTrust SAS70 to ensure the solution has met high, objective standards for security.
5. **Recording and audit trails.** All actions taken by the help desk — gathering files, sending files, and actions taken on the computer itself — should be capable of being recorded for later auditing. This implies session recording, as there is no other way of seeing everything done by the agent. Session recording plus audit trails enables compliance with Sarbanes-Oxley, HIPAA, and other regulatory frameworks.

Support for the Extended Enterprise and Mobile Workforce

“When I’ve got someone in a hotel or visiting [a customer site]—I just can’t use a product that doesn’t work securely over the internet.”

– Manager, Help Desk Remote Access

For too long, help desks have relied on remote access solutions that were hand-me-downs from remote server management. These may have worked for the single-site, everyone-in-their-offices work environments of yesterday, but today’s enterprise is extended to strategic partners: outsourcers, contractors, or contract manufacturers. And, according to the HDI, as many as 8% of the employees that help desks support are working on the road, from home, or offsite. In addition to these mobile employees, the help desk extends to branch locations and field offices around the globe.

As a result, help desks need solutions designed for the extended enterprise and a mobile workforce—solutions that are natively architected for the open Internet.

Conclusions

“Our users really like it. They want to show us first what’s happening. ‘A picture is worth a thousand words.’ It’s difficult being able to explain what’s going on in the system without being able to really see it.”

– Manager, Support Tools

Help desks face challenges by the very nature of being remote from the today’s global and distributed enterprises. Long times to resolution, wasted effort, and many rounds of phone tag frustrate employees and drive up enterprise support costs at a time when budgets are under unprecedented pressure.

Internet-based remote access has become mainstream in the market by empowering help desks to face the challenges of remote support with a secure, scalable solution that literally puts them on the same page with their users. Rather than trying to talk users through diagnostic procedures and imagining what must be on their screen, agents are able to see and guide the user directly, collaborating on a fast and accurate resolution. Help desk agents no longer have to go to work wearing blinders.

Documented business results improve every quadrant of the help desk organization’s balanced scorecard: financial performance, customer satisfaction, process efficiency, and organizational capability. Perhaps most importantly, remote support simply makes support a better experience for agents and users alike, while saving money in the process.

By following the best practices outline in this paper, and selecting a remote access partner after considering the requirements we’ve outlined, we predict your enterprise will experience these benefits, too.

Acknowledgements: WebEx and Its Customers

DB Kay & Associates gratefully acknowledges the financial support and customer contacts provided by WebEx for this white paper and the market research that led to it. WebEx is a leading provider of the current generation of internet-based remote access solutions.

We recommend that service and support organizations that are considering remote access solutions for all the reasons discussed in this paper consider the WebEx Support Center and SMARTtech solutions. For more information on WebEx for Support, visit:

<http://www.webex.com/solutions/online-support-solutions.html>

About DB Kay & Associates

DB Kay & Associates is a consultancy that focuses on high-leverage initiatives for service and support, including knowledge management, self-service, collaboration, and remote access.

DB Kay provides

- assessments
- training
- technology selection
- adoption consulting services

for market-leading support organizations and the vendors who serve them.

David Kay, principal of DB Kay & Associates, has been a leader in applying technology to knowledge-intensive business processes like customer support since 1984. He has been certified by the Help Desk Institute (HDI) as a trainer for Knowledge-Centered Support, and is a frequent speaker and contributor for the Service and Support Professionals Association (SSPA.) Kay holds a patent covering the use of next-generation technology in customer support, and has been recognized as a Customer Service Innovator by the Consortium for Service Innovation.