

Supporting the New Reality of the Remote Workforce with Clientless Remote Computer Control

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The growth of the mobile workforce complicates support

The growth of the mobile and remote workforce has made responsibility for remote support complex and strained for IT professionals. According to an October 2005 analysis done by IDC, the number of remote and mobile workers reached 650 million worldwide in 2004. IDC predicts that, over the next five years, that number will reach 850 million – more than one quarter of the global workforce.¹ The remote workforce, while once a trend, is now the new reality support professionals must face.

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Affirmations of this new reality abound. A 2005 study done by BPM Forum found that 71% of the 400-plus participating enterprise executives and managers expect their percentage of remote workers to increase – a finding consistent across a variety of industries, regardless of company size.²

Tech Republic also published the results of a 2006 study of 370 IT and business professionals, 75% of whom viewed extending business applications to mobile and remote workers as a high priority.³ For their part, remote workers are coming to expect the same access as local employees to applications and internal resources.

The growing number of mergers and acquisitions further augments the size of the remote and global workforce. Mergers create particular headaches for IT professionals who bear the responsibility of fusing multiple platforms, applications and security infrastructures into a functioning network. Even the most pristine IT infrastructure becomes flawed the minute one company merges with another.

Despite these complications, support of these remote workers is pivotal. In the BPM Forum study, 92% of managers link the performance of remote workers directly to the quality of IT support.⁴ Acknowledging the vitality of this connection, however, has not yet adequately improved the quality of IT support. As many as 55% of these managers viewed the quality of their support as C-grade or lower, and up to 40% had already suffered business disruption as a direct result of ineffective support.⁵

“92% of managers link the performance of remote workers directly to the quality of IT support.”

Such downtime already costs companies millions of dollars annually. All of the studies cited above reveal major concerns about security and compliance, capital expenditures, the expense of ongoing technical support and the support and management of extended applications. Lack of IT resources is also an issue as companies anticipate the increase in security threats, errors and vulnerabilities in remote operating systems and software, along with the general shift to a more IT-oriented business model. For companies accustomed to traditional support methods, the rapid growth of the mobile remote workforce demands a new paradigm. The new reality needs a new approach.

¹ IDC, October 2005, Worldwide Mobile Worker Population 2005-2009 Forecast and Analysis

² BPI Forum, 2005, The Remote Revolution: Uptime Issues, Implications and Imperatives in the Mobile Workforce

³ Tech Republic, February 2006, Enabling the Mobile Workforce: Issues and Trends

⁴ BPI Forum, 2005, The Remote Revolution: Uptime Issues, Implications and Imperatives in the Mobile Workforce

⁵ Ibid.

Traditional Methods of Remote Support Are Failing

In an effort to reduce costs, increase efficiency and serve the growing pool of remote end-users, more and more companies are adding web-based and self-service technologies such as FAQs, knowledge bases and download centers to their remote support options. Over 65% also offer email auto-response/suggest, and nearly 59% offer knowledge bases.⁶

However, the implementation of these methods by management does not always correspond with their adoption by employees and remote workers. For example, according to a recent supportindustry.com survey, 96% of support executives responsible for external customer service and support and/or internal helpdesks still offer phone-only support.⁷ This is in spite of the fact that significantly fewer end-users make use of it.

A separate experiment toward cost reduction has been to outsource the typically internal function of support. Accordingly, 40% of the BPM Forum study participants are considering outsourcing support as a solution for remote workers.⁸ But the use of third-party support providers often increases the complexity of answering support requests. For example, it can be difficult for external support personnel to provide patches and fixes for proprietary software since these providers do not have access to underlying source code.

In addition, outsourcing remote support can weaken a company's security and leave it liable for compliance violations. Regulated companies are responsible to comply with regulations even in their use of third-party services. Because of this, companies must ensure not only that internal processes, data storage and procedures are compliant with federal regulations, but also that any engagement in which a third-party service provider handles one or more business functions complies as rigorously.

Service level agreements may lessen potential damages, but they can never lessen liability and may therefore be insufficient protection. SLAs should also be followed by regular audits of the primary third-party service by a third-party auditing organization. Thorough audits are preferable to cursory ones to demonstrate for liability purposes that you have undergone the process of due diligence in ensuring compliance. Ironically, the time and cost invested in such audits can undermine the motive for outsourcing support in the first place. Complex processes quickly become costly processes.

“Complex processes quickly become costly processes.”

In summary, phone support has become less popular with end-users; outsourcing support has its own complexities, risks and costs; and while implementations of online self-help and email support have increased, self-help methods are not end-users' support options of choice. And although in-person support gives support professionals direct access to the problem and allows them to troubleshoot deeply without the convoluted process of deciphering an end-user's description of his issue, this support method is expensive, time consuming and impractical in this marketplace. These traditional models of remote support are losing ground.

⁶ SupportIndustry.com, 2006, Service and Support Metrics Survey

⁷ Ibid.

⁸ BPI Forum, 2005, The Remote Revolution: Uptime Issues, Implications and Imperatives in the Mobile Workforce

The Answer to the New Reality Is Remote Computer Control

One remote support method, however, is gaining in popularity. According to PC Magazine's 18th Annual Reader Satisfaction Survey, remote computer control has a satisfaction rate higher than any other support contact type for mobile workers using laptops and is running a close second to in-person support for remote workers using desktops.⁹

This growing preference for remote control is indicative of the effectiveness of this support method. Like in-person support, remote computer control gives a support professional direct access to the user's problem. On the other hand, the expense of in-person support, the complexity of phone support and the tediousness of knowledge-bases and email support methods are eliminated with remote computer control.

Although considered to be in the early adopter phase until very recently, remote PC control is now being offered by over 60% of the respondents to supportindustry.com's survey – a jump of 55% over last year.¹⁰ Additionally, PC Magazine's Annual Reader Satisfaction Survey found that the satisfaction levels for remote computer control increased at a higher rate than its increase in usage.¹¹ Remote desktop control is the support professional's answer to the new reality of the mobile workforce.

There is no question that remote computer control is the future of support and will soon be expected by end-users. But is it right for your company, and, if so, which product best suits your technical and financial requirements? As these issues move to the top of the CEO/CFO agenda, being able to make the business case has been added to the job qualifications of IT professionals and support managers.

This is especially important in light of the fact that executives are less aware than managers of the troubles in the support trenches. As one example, the BPM Forum study found that four times more executives than managers said their support was available nights, weekends and holidays.¹² Similar disconnects are bound to occur as managers, who are convinced of the need for a remote desktop control solution, propose options to executives, who have a less than immediate grasp of this complex new reality.

Thankfully, the voice of managers making the case for remote PC control is now finding resonances elsewhere. Many industry analysts predict that the use of remote desktop control and screen-sharing will be one of the hottest support segments for several years to come. Reasons for this view abound.

Using remote computer control for support reduces desk-side and on-site visits, saving travel costs and time. Remote control allows the support rep to diagnose and fix the exact problem on the remote computer without having to rely on the confusing explanations or technical ability of non-savvy end-users. Remote workers move back into production mode more quickly when supported by a rep using remote computer control. Both customers and internal users give remote control higher satisfaction ratings than other modes of support, even in-person support. Helpdesks hard-pressed to fill staffing needs or pay overhead find the efficiency of remote desktop control a welcome boon. And IT managers are pleased to see support reps solve problems quickly and move onto the next ticket. Managers making the case for remote computer control are no longer isolated voices crying in the wilderness.

“Remote computer control has a satisfaction rate higher than any other support contact type for mobile workers using laptops.”

⁹ PC Magazine, August 2005, 18th Annual Reader Satisfaction Survey

¹⁰ SupportIndustry.com, 2006, Service and Support Metrics Survey

¹¹ PC Magazine, August 2005, 18th Annual Reader Satisfaction Survey

¹² BPI Forum, 2005, The Remote Revolution: Uptime Issues, Implications and Imperatives in the Mobile Workforce

How to Choose the Right Remote PC Control Solution

Not surprisingly, the real challenge of making the case for remote desktop control rests not so much in proving it to be the best method for supporting remote workers, but in deciphering which specific product one should choose. What follows is intended to help helpdesk managers and others charged with evaluating remote support solutions to establish a meaningful product comparison.

A remote support solution must fulfill certain basic feature requirements, but the commonality of features between products makes comparison on this granular level somewhat tedious, and even misguided. Decision makers in the initial stages of the search will find it more meaningful to step back and approach product comparison at a higher level.

Therefore, the following sections evaluate the leading remote computer control solutions through the lenses of cost-effectiveness, ease of use/deployment and security. Categorically, these are the pain-points created by the new reality of the remote workforce. The solutions compared below are clientless remote control solutions; therefore, they do not require end-users to purchase and install software. Typically, this model enables fast incident-resolution, requires no previous rep/end-user contact and leaves no footprint on the remote end-user's system. Features are considered in the comparisons below, of course, but as part of a higher-level view intended to help decision makers establish a paradigm for their selection.

“Managers making the case for remote control are no longer isolated voices crying in the wilderness.”

Cost Effectiveness

Often the first problems for support managers to solve are financial. According to the supportindustry.com survey, 77% of IT executives experienced an increased demand for support services in 2005, but 42% of budgets stayed the same or decreased.¹³ In this atmosphere, the more you can do to define and measure costs, the better.

How should you determine a remote support solution's cost-effectiveness? A true evaluation measures both apparent and unapparent costs. Apparent costs are stated pricing and fees. Examples include the cost of initial deployment, licensing fees, and license sharing (the number of technicians able to use each license).

Unapparent costs are more elusive. Slow or unreliable connections, for example, can double or triple the length of each support session, thereby increasing the number of support personnel required to handle the workload. This also results in slower resolution of the problem and the consequent lost productivity and lower end-user satisfaction ratings.

The number of concurrent sessions each tech can handle also comes into play. A support rep with the ability to handle multiple sessions at once can gain control of every system involved in a technical problem and troubleshoot all of them from his desktop. If one support rep can handle more remote workers simultaneously, the result will be faster service, more satisfied employees, and higher productivity on both ends.

The best approach is to measure apparent costs as concretely as possible and then add to this measurement what you can assess from the unapparent costs. To measure the concrete costs associated with an application service provider (ASP), use the following formula:

$$\text{Initial setup fee} + (\text{license amt.} \times \text{license cost} \times \text{time}) - \text{discounts}$$

¹³ SupportIndustry.com, 2006, Service and Support Metrics Survey

The majority of remote support solution providers are ASPs, and, with perhaps slight modifications, the equation above will allow you to determine the hard costs for all of them.

One remote support solution provider, Bomgar™, is not an ASP. Its solution, the Bomgar Box™, is an appliance-based solution you can host yourself. Evaluating Bomgar's™ cost involves measuring the initial cost together with a yearly Maintenance Plan that covers support and upgrades.

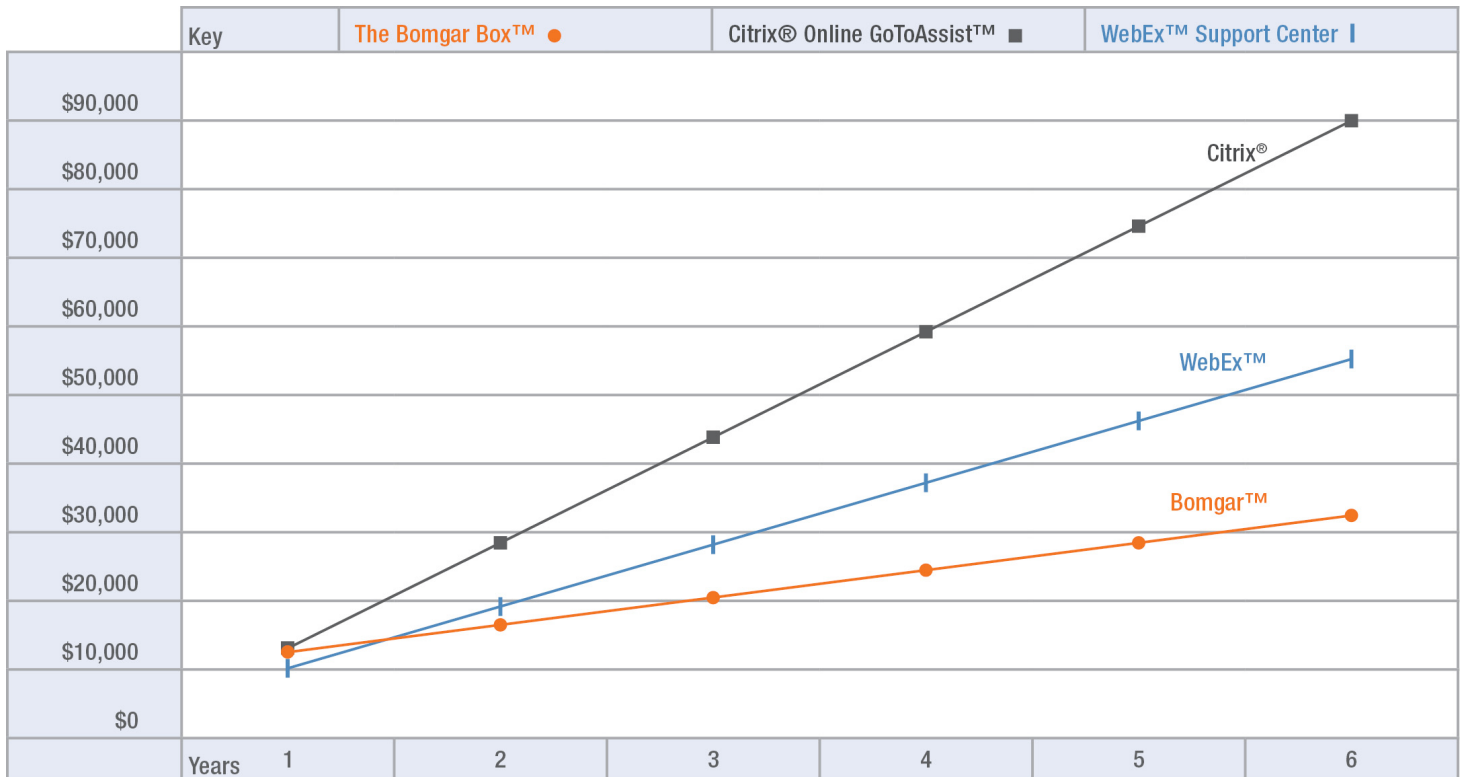
To enumerate the hard cost of the Bomgar Box™, use the following equation:

$$\text{(Bomgar Box™ + license amt. – discounts) + (20% maintenance x time)}$$

The ASP model, based as it is on monthly fees, has a low initial cost compared to the Bomgar™ model. However, IT managers who plan to use remote PC control for more than 12 months will want to look at total costs over time.

The chart below delineates the cost trajectory over a 6 year period for 5 support licenses from the following providers: Citrix® Online GoToAssist™, WebEx™ Support Center, and Bomgar™.

Chart | Six Year Cumulative Cost Analysis



An estimation of unapparent costs will take into account the possibility of license sharing between reps, the speed of connectivity, and the ability for a single rep to handle multiple concurrent sessions.

Table 1 | Other Cost Considerations

Feature Benefit	Bomgar Box™	WebEx™ Support Center	Citrix® Online GoToAssist™
License Sharing Buy fewer licenses – multiple support reps can share the same software license	Yes. License available to all reps – based on concurrent usage	Typically named user licensing	Typically named user licensing. No license required for remote PC
Download Size The size of the client download affects connection speed	<300K	3.2MB	600K
Speed of Connection More efficient support staff – faster connections speed up incident resolution	Connects in about 10 seconds to remote computers	Up to 10 minutes; varies with speed of internet connectivity to WebEx's™ data center	Varies with speed of internet connectivity to Citrix's® data center
Multi-session Control More efficient support staff – representatives can assist more than one client at a time	Yes. Reps can support an unlimited number of simultaneous sessions	One support representative can host up to two simultaneous sessions	One support rep can host up to eight simultaneous sessions

Ease Of Use

Closely tied to a solution's cost effectiveness is its ease of use. A solution that is hard to deploy and/or use will increase unapparent costs. For an IT support manager, every second counts. Wasted time slows down incident-resolution and costs money.

Your initial deployment should be simple. If you choose an ASP, the solution must be an instant-on. If you deploy an appliance-based solution, it should be turn-key. And for reasons of simplicity and security, your solution should not require you to alter your network firewall settings. The connection process must also be simple for the end-user and the support representative. If a support rep must walk novice end-users through a complicated connection process, your company is losing money.

Representatives should also have the tools they need for maximum efficiency, especially if the solution you choose allows reps to handle multiple simultaneous sessions. Tools like support queues, session sharing and session transfer allow support personnel to work efficiently as a team. On the individual session level, tools like chat and file transfer should be context-specific so that a representative can easily resolve an end-user's problem.

Finally, the solution you choose should require very little of the remote end-user. Once connected to the remote computer, the support representative should be self-sufficient. Requiring remote workers to be present to reinitiate a connection after a reboot is an inefficient use of their time. So if the solution claims the ability to reboot and reconnect to a remote computer, you should ensure it is a true reboot-reconnect feature. Does the “reconnect” feature require an end-user’s intervention? The table below compares some features that make for easier incident resolution.

Table 2 | Ease of Use

Feature Benefit	The Bomgar Box™	WebEx™ Support Center	Citrix® Online GoToAssist™
Fast Initial Deployment Begin supporting quickly and easily	Hardware setup takes about 30 minutes	Varies	Varies
Simple Connection Process Customers can connect easily with support reps	Customers simply chat with a rep and/or click a link. Control begins in about 10 seconds	Customers typically receive an email and then download the WebEx™ player before the session starts	Customers typically chat with a rep and/or click on a link
Support Queues Manage incoming support requests efficiently	Yes	No	Yes
Session Sharing & Transfer Support reps can easily escalate support issues	Yes	Yes	Yes
Context-specific Chat & File Transfer Support tools are easy to access during the session	Yes	Yes	Yes
True Reboot/Reconnect Support rep can troubleshoot with no end-user assistance	Yes	No. Reboot only	No. Reboot only

The best way to evaluate a solution’s ease of use, and to further assess what may be its unapparent costs, is to try the solution before purchasing. Citrix® Online GoToAssist™, WebEx™ Support Center, and Bomgar™ are all available in trial versions. Because of its unique deployment model, Bomgar™ may also provide a more in-depth look at Bomgar™ via a temporary site, and qualified companies may participate in the company’s Evaluation Program. This involves self-hosting a Bomgar Box™ for an evaluation period.

Security

Regulations like Sarbanes-Oxley, HIPAA and Gramm-Leach-Bliley, while defining procedures necessary to ensure security, have also added significant costs to doing so. Your remote support solution should make meeting both industry regulations and your own company's security standards as easy as possible. When evaluating the security of a solution, you must weigh everything from the support session level to the overarching architecture of the application.

A secure remote support solution will embody a number of features to ensure security at the session level. Industry-standard SSL encryption (or higher) is needed to ensure the datastream is secure. Use of the software should be guarded by tightly controlled user privileges and password-protected logins. Some method of recording session data should also be in place. Logging and reporting, for example, can serve to give you a strong audit trail.

At the architectural level, other realities should be considered. The software you choose should allow support reps to connect temporarily with the remote computer and then disconnect completely. No residual software should remain on the end-user's system, and no means of reconnecting should be available other than those required for the initial connection. For example, if a solution requires an end-user to run a file in order to connect with a representative, that file should be good for only one-time use, and it should completely uninstall from the end-user's system once the session is over. The end-user should be required to perform the entire connection process again if he needs to contact his representative later.

Table 3 | Security

Feature Benefit	The Bomgar Box™	WebEx™ Support Center	Citrix® Online GoToAssist™
SSL Encryption Protects sensitive data from unauthorized viewing	256-bit AES SSL encryption	128-bit SSL encryption	128-bit SSL encryption
Granular Control of User Privileges Vary users' level of access to the software; separate admins from reps	Yes	No	Yes
Session Logging or Recording Maintain a thorough audit trail	Yes	Yes	Yes
Complete Client Uninstall Client download automatically uninstalls from the remote PC	Yes. Bomgar™ automatically and completely uninstalls itself from the remote computer	No. WebEx™ software must be manually uninstalled by the remote client	Yes. The GoToAssist™ executable automatically uninstalls from the remote computer
Internal Data Remains In House Limits scope of liability to protect your business	Yes. You control your data at all times	No. Your data is routed through WebEx™ servers	No. Your data is routed through Citrix® servers

Another factor to consider at the architectural level is the business model of your solution provider. If you use an ASP, you inevitably route your data and your customers' data through a third party. Doing so expands the scope of your compliance liability. Secure use of an ASP will involve strict service level agreements and regular and rigorous audits of the service provider by a third-party auditing organization, such as Symantec. These audits should also be weighed when calculating the unapparent expense of a solution.

If, on the other hand, you use an appliance-based remote control solution, such as the Bomgar Box™, none of your data is routed through a third party. By hosting the solution yourself, you significantly narrow the scope of your liability and can better monitor the secure use of the solution.

While researching the security of a clientless remote support solution, you will also want to weigh third-party validation. Some providers have submitted their software to security-auditing organizations, such as the Symantec Corporation. Results of these assessments can usually be found on the provider's website. If you cannot find a third-party security-audit of the solution, ask the company to send you one. Due diligence regarding the security of your solution cannot be taken lightly.

The Right Solution

The new reality of the remote workforce poses many unknowns to the helpdesk. Ultimately, managers responsible for supporting remote and mobile workers must first define and then balance security, simplicity and costs. Defining these categories is not always easy. Managers must think not only about apparent costs, but about unapparent costs, as well. While one would expect certain features to make a solution easy to use, actually trying and testing a solution is really the best way to measure simplicity. This takes some effort and thought. Finally, one must consider the full scope of security, taking into account not only the features that lend to security, but also the overarching architecture of a solution.

On the other hand, this new reality makes the helpdesk central to business success. Support managers have the opportunity to demonstrate the need for and effectiveness of new technologies in a new environment of remote support. As the world outside the LAN grows, the responsibility for remote support does not have to remain complex and costly. Clientless remote desktop control, the new mode of supporting the remote workforce, promises the security, simplicity, and cost-effectiveness the helpdesk needs.

About Bomgar™

Bomgar™ is the only provider of appliance-based remote support solutions. With the Bomgar Box™, Bomgar's™ clients can eliminate monthly fees and enhance the security of their helpdesks. The company offers the only appliance-based remote support solution and focuses primarily on support professionals. Bomgar™ remote control software does not require any pre-installation or configuration, and it works between virtually any two computers, anywhere in the world, even through corporate firewalls.

For More Information

Corporate Office
578 Highland Colony Parkway
Paragon Centre, Suite 300
Ridgeland, MS 39157

Atlanta Office
11330 Lakefield Drive
Suite 200
Duluth, GA 30097

Newport Office
260 Newport Center Drive
Suite 401
Newport Beach, CA 92660

Toll Free: 1.877.8BOMGAR
Direct: 601.519.0123
Fax: 601.510.9080
Email: sales@bomgar.com
info@bomgar.com
Hours: 7:00-6:00 CST