



VIEWFINITY

Top Desktop Management Pain Points



2010

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MANAGING DESKTOPS AND LAPTOPS IS A CHALLENGE

In today's fast-paced corporate environment it is abundantly clear: If a worker's computer is out of order, that individual cannot perform his or her daily duties. The longer the computer is not working, the greater the pressure is on the help desk. The consequences are obvious - worker productivity degrades as result of issues such as the server is down, or even with issues far less complicated, such as a mobile user cannot get an up-to-date software version or the installation of harmful software impacts the PC's performance. In a perfect world, IT systems never go down, applications always work as expected, and users only install approved software; but in the real world it is quite different. The goal of the IT organization is to solve these issues in a timely manner and keep the overall rate of user downtime to a minimal, while also proactively managing the desktop environment so that the volume of help desk calls and security violations are reduced.

A PROACTIVE APPROACH

IT organizations often try to enforce standards by implementing certain policies which hopefully allow for tighter control and better management of its desktop environment, and in effect, minimize support issues. These standards can vary between common desktop images, from installing identical sets of applications, pointing user's personal data and settings to network shares, and packaging applications into custom MSIs. Many existing software solutions can help IT departments minimize the volume of help desk calls but there is no perfect approach which can be applied to each and every scenario.

Today, the reality is that the desktop is not only a business tool, but it's also an instrument for socializing with friends, finding sources of news, conducting research, playing games and more. When users receive a PC configured for company corporate standards, most likely a month later the IT support staff will be dealing with unexpected issues on that device. It's important for IT organizations to employ desktop management approaches that include not only problem resolution measures, such as the ability to restore the OS image and reinstall non-working application files, but also implement proactive techniques that identify issues before or as they occur. Help desk personnel should be automatically notified of these potential issues even before the user opens a support ticket, and where possible, take immediate proactive action.

ASSET INVENTORY IS KEY

The starting point for managing personal computers is having basic knowledge of what hardware and software is installed in the desktop environment. IT support personnel should not have to ask end users or interrupt a working session in order to get a PC serial number, OS service pack level, or software versions and the type of hardware that is running on a particular computer. On-demand access to asset inventory data is a key component for successfully managing desktops and laptops. Also, having an up-to-date inventory of all IT assets is critical when starting to plan for hardware

refreshes, OS upgrades, or troubleshooting daily support issues.

MOBILE WORKFORCE SUPPORT CHALLENGES

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For most IT organizations, it is clear how to deal with desktop and laptop issues within the boundaries of your corporate network. Administrators typically engage in conversation with the end user, and perhaps the Administrator then initiates a remote desktop session to resolve a problem, distribute patches or software updates over the LAN, collect asset information and all other routine IT tasks. The real challenge begins when off site and telecommuting employees are experiencing computer problems while working from home, hotels, airports, and/or any other remote internet hot spot. Without tools that can reach and manage these mobile PCs, typical resolution time can increase from 10 minutes to an hour or more. If an end user is working from his hotel room and you need to push out the latest software update to his laptop, the method is completely different than deploying software to an internal user. With the mobile worker, you must walk them through a series of steps and explain how to download the patch and where it needs to be installed. Then, what happens if an error occurs during the update process? The ability to readily support your mobile workforce, regardless of worker location, is a key element in effective and efficient desktop and laptop management.

USER CONTROL: ALL OR NOTHING

Many organizations have elected to remove local administrative rights from its personal computers and operate in a least privileges mode. This practice is used to keep the desktop environment more secure, free of malware and to prevent changes to the standard operating images. However, IT support staff must then deal with situations where employees need administrator rights in order to perform their job. For example, an end user is working at a customer's office and needs to urgently install the customer's in-house custom software package and also needs to install and connect to a local printer to print important documents for the client. Tasks such as updating software, installing printer drivers (among others) require local administrator rights in order to be carried out. Granting full administrator rights opens up security holes and introduces potential risks. Knowing what approaches IT can adopt to deal with one-off privilege management per "action" rather than issuing blanket administrator rights at the machine level is yet another very important element for properly and efficiently managing the delicate balance between end user needs and productivity, while still securing your desktop and laptop environment.

VIEWFINITY PRIVILEGE AND SYSTEMS MANAGEMENT

Viewfinity Privilege and Systems Management

Viewfinity offers privilege and systems management solutions that are extremely cost effective and easy-to-use. Viewfinity Systems Management solution can be delivered from a web-hosted (cloud-based) platform or installed on premises. The Viewfinity web-hosted platform offers a viable cost-saving option for all organizations as no specialized IT experience is required and there is no need to purchase and install a management platform and server. The cloud-computing platform allows IT department to focus on delivering services that address the business needs of end users rather than using their time to support the platform that houses the systems management solution.

Starting with a straightforward agent deployment and discovery process of your resources, which can be done remotely, you can begin managing your desktop, laptop and servers from anywhere and at any time, regardless of the worker's location, as long as the PC is connected to the Internet. There is no need to have VPN connections or open any additional firewall ports. The connection relies on default browsing ports 80 and 443.

Viewfinity Suites

Systems Management: Centralized and silent software deployment, OS deployment, patch management, asset inventory, remote desktop, power management and unique IT support features, including activity recording and rollback/undo of user personality components.

Privilege Management: Flexible blocking/whitelisting, privilege elevation, automated policy management and auditing/validation, all through granular regulation of administrator rights

User Migration: Migrates desktops and laptops to the Windows 7 OS on a one-to-many basis, from a centralized location, reducing time spent on this task by 83%.

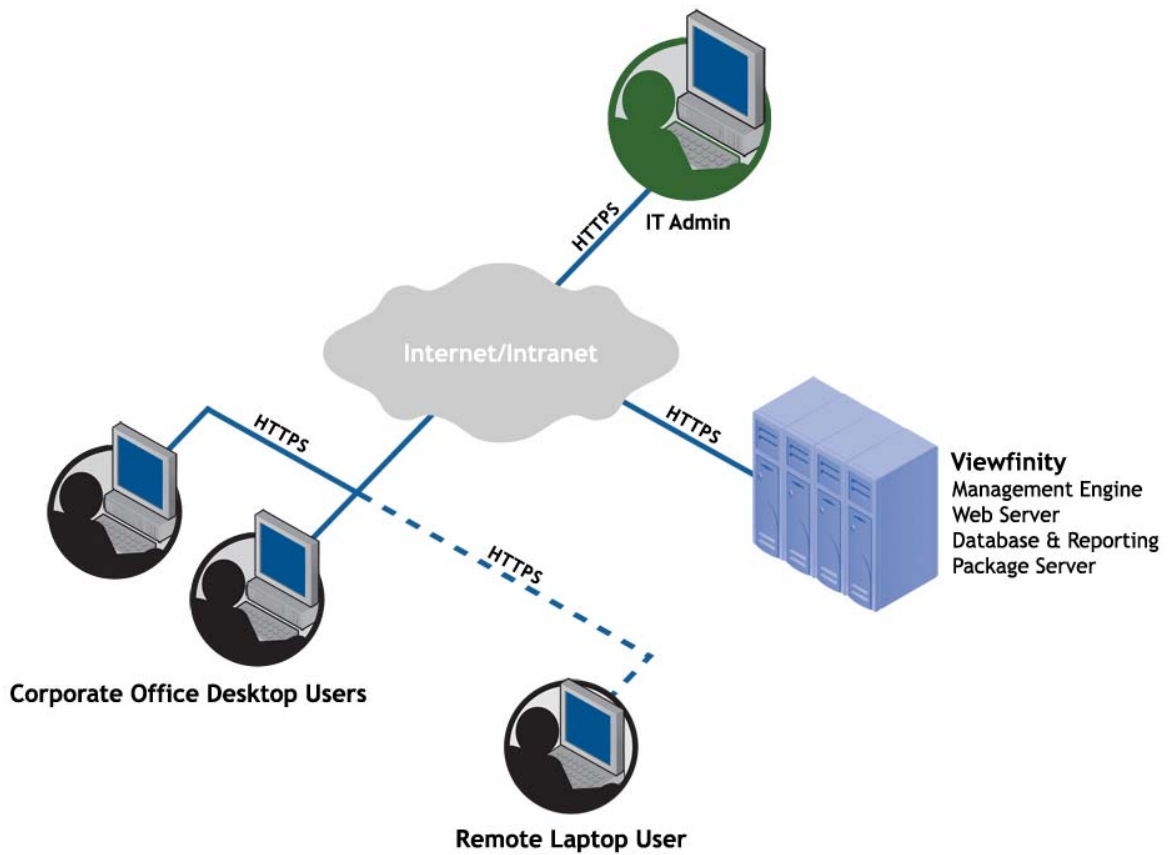
Viewfinity Cloud Security

Viewfinity uses advanced technology for Internet security. When you access the Viewfinity hosted site using your web browser, 128 bit Secure Socket Layer (SSL) technology protects your information. Using both server authentication and data encryption, SSL ensures your data is safe, secure, and available only to registered users within your organization.

Viewfinity servers are hosted in a secure server environment that uses a double layer firewall infrastructure - a physical firewall at the data center and another software firewall on the Viewfinity server. Other advanced technologies to prevent interference or access from outside intruders are also utilized.

The Viewfinity Site/Cloud Service is not used to host customer data other than information that is necessary for user authentication and basic computer inventory information. The Viewfinity server is utilized as a tunnel whereby all sensitive information is immediately transferred between the

customer's computers and the Internet browser, without storing this information on the Viewfinity Server.



Viewfinity Cloud-Computing Platform

SYSTEMS MANAGEMENT CONSIDERATIONS

Managing the Mobile User

It is widely published that more than 25% of US workers telecommute at least one day per week. It is also true that in today's large complex maze of firewalls that must communicate with each other, security management is a very difficult operation. Even with the use of a firewall, it is difficult to resolve problems for mobile users, since most mobile workers try to avoid logging into the corporate network, thus are very rarely within the confines of the firewall. This is not a deceitful act, rather the major reason is that mobile workers need to be as independent as possible while telecommuting. Most applications that mobile workers use do not require a direct connection to the servers inside of the firewall.

IT organizations must be concerned not only with security, but also must have the ability to support its mobile workers allowing them to be as productive as employees who work within the boundaries of the corporate network. In most cases, the only tool available for IT is remote terminal, but troubleshooting is cumbersome since the actions of the users are not recorded, and the end user quite often cannot reproduce the problem or explain it properly.

There are several actions that IT should be able to perform on the PCs operated by its mobile workers. The first is delivery of new software and software updates. This is a rather routine task to support for employees inside corporate firewall, but becomes difficult and often times not even feasible, to deploy software to mobile workers. There are several reasons that make this a difficult job, most notably is that most systems management software on the market is based solely on managing servers that are based inside the corporation environment. Even when an option exists to place the server in a DMZ, it is usually not a good solution since the software is not written nor optimized for the Internet. Other actions, like blocking certain applications from executing or elevating privileges for functions which are vitally needed for mobile users, like the ability to install printers, are not possible because of the difficulty in controlling the off-network desktop, without using software which by design is cloud oriented.

Off- Network Software Delivery

The Viewfinity service-platform allows for unattended and transparent software deployment. Using our intuitive wizard interface, software can be scheduled for targeted groups of computers either for local distribution or IT Administrators may use our cloud platform to function as the distribution point as software installation is enabled through our platform.

Delivering updates and new applications to remote machines presents a significant challenge to the IT staff. For many mobile users, logging into the corporate network is an unnecessary and rare occurrence. Furthermore, when mobile users finally do log in, they often find a backlog of required updates that take hours and several reboots to install. As a result, this may lead to an avoidance of logging on all together. With Viewfinity, IT administrators no longer have to devise special software distribution plans in order to update remote desktops and laptops that do not regularly connect to the corporate network.

Viewfinity's platform is architected such that no systems management on-premise server installation is required to deploy software. Deployment is enabled through our platform so IT Administrators may utilize our web service platform by having it function as the distribution point (or you may opt to use your local server). All you need is for the endpoint computer to be connected to the Internet and, as soon as the desktop or laptop establishes an Internet connection, the software deployment process begins. Using our model, you can easily deploy software to all endpoints, whether they are physically connected to the corporate network or not. This is done through a secure and encrypted HTTPS connection.

Remote Desktop

Viewfinity Remote Desktop allows you to access desktops owned by your organization via the Internet or LAN. Remote Desktop uses SSL (HTTPS) protocol to ensure your privacy is secured and protected. Our advanced remote control management features such as chat and the ability to

transfer files between host and remote PC, simplify troubleshooting and remote management processes for both the administrator and the end user.

Remote Desktop has a choice of two methods for handling the initiating of a remote management session: the end user can be prompted to accept the Remote Desktop connection; or the administrator may connect via the remote computer, without requiring conformation from the end user.

Activity Recording

Viewfinity real-time monitoring and recording of laptop, desktop, and application events, provides the administrator with a complete record of all changes being made on either the laptop or the desktop. Viewfinity's precise activity recording feature provides a picture of all meaningful user/application activity for every laptop and desktop in an easy-to-identify format: Application Installed, File Created, Device Connected, etc.

When an end user calls to report a problem on his PC, the IT person accesses the desktop activity journal for that specific end user, and a record of all recent desktop activities appears. The desktop activity journal GUI presents information in such a way, that the end users no longer have to struggle with trying to explain the problem in detail.

For every relevant desktop activity, Activity Recording captures screen recorded video of laptop and desktop activity, including individual application events (this feature is optional and can be disabled). Screen recordings of desktop activity offer another layer of explanation and confirmation related to changes occurring on the desktop. This is especially helpful when end users cannot retrace their steps or explain what may have been the initiating factor causing the problem.

Rollback & Centralized System Restore

Viewfinity's Rollback helps administrators quickly and easily resolve most desktop support issues using only a web browser and an Internet connection. The Central Management Console displays all of the machines that contain the Viewfinity agent. Simply select the appropriate end user computer to display, and all relevant activities that have taken place on the machine in an easy-to-read, intuitive format. There is no need for the end user to attempt to explain the problem — all you need to know is what application or user setting is being affected. Once the exact event has been identified, simply "roll back" that individual action to correct the problem — without affecting any other applications, configurations, or data changes.

User Personality Rollback restores specific components such as network drives, deleted icons, deleted printers, and other dependent components which can be performed independently of user created data and the computer system state.

Centralized System Restore supports the instant rollback of multiple systems from one central management console. The system centrally collects checkpoints and instantly restores the desktop back to a particular "working state" without reinstalling the operating system. This rollback capability will not affect data file changes — only post-rollback application and system changes will be restored.

Asset Management

Viewfinity's inventory metrics generate meaningful reports needed by IT and business decision makers so that you can effectively prepare for software audits, track spending, ensure compliance, identify vulnerabilities within the desktop environment, and make informed decisions about your IT investments.

Mobile computers and laptops present a challenge to IT Administrators during the IT inventory collection process. Viewfinity overcomes these challenges by automatically inventorying a laptop the moment it reconnects to the Internet. Because the administrator and desktop are both connected to the Viewfinity web service via a secure Internet HTTPS connection, the laptop doesn't need to be connected to the corporate network in order for the inventory information to be collected. The information is then added to the master file and your corporate records are updated. No longer are IT administrators required to keep a manual record of which laptops have not yet been inventoried.

OS Deployment and Upgrades

Every company faces increasing challenges for configuring and deploying new PCs and workstations with new operating systems in a distributed environment. Having a deployment solution that enables them to use a standard configuration for all new machines significantly decreases support expenses, including time and cost.

Viewfinity has teamed up with Acronis to offer our customers an award-winning OS deployment product that provides centralized control over the capture, customization and deployment of disk images. Viewfinity OS Deployment reduces IT support and maintenance costs by helping you standardize your entire company on a single or select few operating systems. OS Deployment creates an exact disk image of the standard configuration, including the operating system, configuration files and all applications. With our multicast capabilities, the software then deploys that image to multiple systems simultaneously, making it ideal for rapid bare-metal installations.

Patch Management

Security has altered the IT professional's job dramatically in the last few years. Many software vendors work extremely hard identifying, developing, and releasing security patches to their products on a regular basis. Managing these releases in the corporate environment has become a daunting set of processes which demands attention, flexibility, monitoring, and execution. Keeping the environment secure is not an easy task and not a single IT administrator looks forward to Microsoft's "Black Tuesday", particularly when the number of announced update releases is substantial.

Viewfinity Patch Management provides the most current technology to synchronize a local list of available patches from the Microsoft web site. Viewfinity Patch Management enables IT administrators to deploy the latest Microsoft product updates to both Microsoft Windows Servers and Windows XP, Windows Vista and Windows 7 client operating systems. The security patches are delivered across whatever connection exists for the computer without having to wait until LAN-disconnected clients connect to the network to validate against new rules. Viewfinity Patch Management ensures that all assets are patched and secure – even in instances where employees use their home computer for business services. In addition to full Active Directory integration,

Viewfinity Patch Management also works with non-Active Directory computers so that you can capture and secure all aspects of your environment.

Dashboards: Reviewing the Health and Stability of the Environment

As an IT professional, your primary goal is to support the information technology infrastructure of your customers in the best possible manner. You need the ability to monitor and manage your environment in way that is both proactive and expedient. The Viewfinity Systems Management Dashboard provides the ability to develop a valuable overview of your organization's technology support needs that require action.

The Viewfinity Systems Management console provides a quick view into the operations and status of the company assets through the Viewfinity Dashboard. The Viewfinity Dashboard technology, allows a Viewfinity administrator to completely customize what is shown based on company specific needs and requirements through the use of graphical web panes. Each web pane is capable of showing any type of reporting data defined by the Viewfinity administrator. This "at-a-glance" overview allows the Viewfinity administrator to quickly determine a multitude of criteria in a short time based on current projects and SLAs.

DESKTOP LOCKDOWN: PRIVILEGE MANAGEMENT

Many organizations enforce PC lockdown policies to help with the reduction of management costs and to comply with certain security regulations. However, many available lockdown environments are implemented with an "all or nothing" approach so when local administrative rights are removed, the end user does not have the appropriate permissions to install applications or updates. While locking down PCs will reduce support issues, quite often new support issues are introduced due to the privilege restrictions. Viewfinity products allow for flexible lockdown through the ability to manage privileges, such as the ability to elevate privileges per application and process Windows desktop functions and administrative tasks. This flexible yet controlled method for managing desktops ensures the environment is locked and protected, while at the same time, support issues are more manageable than in an uncontrolled environment where users have full rights.

Privilege Elevation

Certain Windows applications and desktop functions require local administrative privileges in order to run and function properly on a desktop or laptop. Granting Full Administrator Rights creates a less secure desktop environment and opens the door for malicious hackers and viruses, thus organizations consider granting Administrator Rights to standard users to be quite risky. It also breaches compliance regulations posed by the Sarbanes-Oxley Act and HIPAA. Additionally, the US Government Federal Desktop Core Configuration (FDCC) mandate stipulates that administrative rights cannot be granted to end users and may not be made available on federal desktops and laptops. Viewfinity elevates administrative rights for certain processes or applications rather than at the user account level. When permissions are raised, the elevation is performed directly within the security token of the user account. The application, or process, is started using the current user

credentials as opposed to using RUN AS which needs the Administrative account in order to raise privileges.

The screenshot shows the Viewfinity interface for managing policies. The user 'alex' is logged in. The breadcrumb trail is 'Main > Policies > Policies'. The interface includes a search bar for policies and a table of policy entries. The table has columns for Policy, Applications, and Computers/Users. The last row is highlighted in yellow.

Policy	Applications	Computers/Users
✓ Allow to install Local Printers	Application Independent	DMIFinance
✓ Elevate Right to LA Dev Team to Run Visual Studio	Rvsezrn.exe	DMILA_DEV
✓ Elevate System Restore	Application Independent	WIN7CL1
✓ Permit to Install signed ActiveX	Application Independent	All Computers
✓ Permit to NY Sales to Install approved Apps	Specific Applications	DMISales
✓ permit to run Disk Defragmentation	Application Independent	VF-XP-CLIENT2
✓ Temporary all to user run apps as Admins	Any Application	Organization Unit / Sales

Privilege Elevation Policies

In some scenarios, administrators may need to execute scripts on the client machine. Under normal circumstances this would require administrative rights in order to run. Using Viewfinity Privilege Management, administrators can create policies that will execute scripts without needing to assign local administrator rights to the end user.

Also, before removing local administrative rights from end-points, it is important to gather accurate information about the applications which will require administrative rights once permissions are removed from users. Accurate reporting is required in order to keep the user environment free of disruption. Viewfinity supports Shell Extension policies which allow non-admin users to run all applications with elevated permissions. After a period of time, when application usage, based on elevation, has been determined and collected, Shell Extension policies can be deactivated and policies for those applications can be enabled. The data collected can be reviewed in a report that contains information for a single PC or multiple PCs/users, and includes details on usage and applications.

Auditing, Validation and Reporting

A key component for policy management is the ability to audit and report on the status of privilege management policies. Administrators should not have to go through the process of remotely connect to a PC to validate that a policy is in effect. Instead, IT needs centralized management capabilities to report on and review the status of policies to determine whether they have been successfully delivered and are activated.

The screenshot displays the Viewfinity web interface. At the top right, it shows 'Evaluation Days Remaining: 12'. The main content area is titled 'alex' and 'VIEWFINITY'. Below the header, it shows the date and time: '22-Jan-10 11:04:32 (GMT -05:00)'. The report is titled 'Applied Elevate Privileges' and contains a table with the following data:

Active	Policy	Computer/Group	Application/Group	Rule
✓	Elevate Right to LA Dev Team to Run Visual Studio	DMILA_DEV	Rvsezrn.exe	Elevated Privileges
✓	Elevate System Restore	WIN7CL1	Application Independent	Windows Administrative Tasks
✓	Permit to NY Sales to install approved Apps	DM\Sales	Any Application	Install Applications
✓	permit to run Disk Defragmentation	VF-XP-CLIENT2	Application Independent	Windows Administrative Tasks
✓	Temporary all to user run apps as Admins	Organization Unit / Sales	Any Application	Shell Extensions

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Viewfinity Policy Reporting

Application Block/White Listing

In some cases, IT may want to permanently prevent users from using certain applications, while for other applications, blocking the execution of an application may be a temporary measure. In order to stop unwanted software installations, some organizations opt to completely lockdown its desktops. This approach can be an unproductive one for end users, seeing that it doesn't offer any flexibility for supporting non-standard requirements, such as the needs of traveling or remote users.

Using Viewfinity, IT can define a list of potentially unwanted software which can be automatically blocked from usage. For example, an organization may decide that Peer to Peer client software can be a source of unwanted content or viruses. With Viewfinity, it is possible to block all peer to peer clients.

A "white list only" model allows IT to build a list of approved software that can be installed and/or executed. Viewfinity allows IT Administrators to create a white list of applications and permits or blocks the use of child processes. For example, a retail store PC can be configured to only present and run the applications that are required for the store employee to work. Other standard desktop applications are not available — no games, IM, iTunes, etc. are visible.

Viewfinity block/white listing capabilities provide a single point solution which can be applied to all staff, regardless of work location, and is in effect regardless of the user's connection status.

Policy	Applications	Computers/Users	Rule
✓ Alert End-User	Windows Games	VF-XP-CLIENT2	Alert on start
✓ Block all Peer to Peer	Peer to Peer Clients	All Computers	Block
✓ Block Unwanted Software	unwanted software	Subnet / 192.168.72.0/24	Block
✓ Protect Application Settings	Protected Applications	All Computers	Lockdown
✓ white list applications	approved applications	Organization Unit / Sales	Start Normally

Block/White List/Lockdown Policies

Policies for Mobile Workers

It is important to be able to manage privileges for internal users as well mobile workers. Viewfinity does not require laptops or desktops to be part of the Active Directory domain or to be directly connected to the corporate network in order to activate policies that manage administrator privileges. As soon as the client PC connects to the internet, Viewfinity propagates the policies and rules established by the IT Administrator. Once delivered, all policies continue to be enforced even while the user is working offline

Activity Auditing

Viewfinity supports real-time monitoring and recording of laptop, desktop and application events, providing the administrator with an auditable record of all changes being made on the laptop or desktop. Viewfinity’s precise activity recording feature provides a picture of all meaningful user/application activity for every laptop and desktop. When an audit needs to be performed on a specific PC, our Activity Recording feature both expedites the process, as well as aiding in the interpretation of the results of information collected. The IT Administrator simply accesses the desktop activity journal for the specific end user and a record of all recent desktop activities appears.

SUMMARY

As the market matures and solutions become available to help organizations get a better handle on the pain points related to desktop management, there will likely be a new set of challenges introduced. But today’s most urgent and pressing issues are clear:

- Providing better support and management for your mobile workforce
- Securing your environment through desktop lockdown without simply causing a shift in the type of help desk calls
- Deploying software versions and patch updates easily and with extended reach to mobile workers
- Resolving help desk calls faster

Viewfinity's strategy is to provide robust and high-value privilege and systems management which delivers immediate IT value by having an easy-to-use, easy-to-implement systems management solution up and running in a fraction of the time it takes to implement other solutions.

Our goals are aligned with the business goals of our customers. We are confident our solutions offer a better way to manage large numbers of desktops across the enterprise and extend an enterprise's ability to exceed its customer service expectations.

ABOUT VIEWFINITY

Viewfinity offers privilege and systems management solutions to manage, support and control desktops, laptops and Windows servers. Viewfinity is a single platform to support on-network and mobile users that allows IT administrators to manage and control any computer over the WAN regardless of worker location. With its web-hosted model, Viewfinity solves IT's greatest headache--management of mobile workers—with true native remote systems management capabilities and absolute network independence, eliminating reliance on corporate network connectivity or VPN.

Through our two suites, Privilege Management and Systems Management, IT professionals are better able to provide on-network and mobile workers with patch management, software and OS deployment, management of user privileges, troubleshooting and fast problem resolution services. Viewfinity introduces granularity to privilege management by offering enhanced flexibility and control for managing administrator rights for locked down computers. For more information, visit www.viewfinity.com.