



The Benefits of Implementing a Comprehensive Desktop Management Solution



Abstract

The following paper describes a customer implementation of IT Works by System Management Technologies (SMT). The client has requested anonymity.

Desktop management is critical to the successful deployment of a distributed computing environment. The ability to standardize on components and reduce the complexity of deployments is critical to minimizing the Total Cost of Ownership (TCO).

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Executive Summary

Our customer's Information Technology (I.T.) department was overwhelmed with providing computer support services to the organization. Managing over 500 desktops and end users with an assortment of ad hoc manual processes, single point solutions and undocumented configuration changes caused support response to be less than desired. Manpower was not the problem. Manpower increases over the past year had little impact on the support backlog. End users and management wanted answers as the business operations were being impacted due to untimely downtime. The I.T. department manager was determined to make changes that enabled the support staff to work effectively and efficiently.

The I.T. manager needed to find a better way of delivering desktop management to his organization. He started with the idea of a Common Operating Environment (COE) where all computers would have the same base install of the operating system and application software. He also knew that a comprehensive Desktop Management solution was required to support the new COE.

After reviewing several solutions, he selected IT Works by System Management Technologies. The IT Works solution is designed to deploy operating systems and software applications using an unattended installation process, i.e., no more manual computer configurations and no more "missed steps". IT Works incorporates a Hierarchical Inheritance Model (HIM) that significantly reduces the time required to configure computers. HIM allows a single COE to be used for all desktops and notebooks being managed. Once the COE is set, every managed computer will inherit the identical operating system and application software. This step significantly reduced the complexity to ensure the COE was installed exactly the same on all computers. HIM and the unattended installations reduced the project deployment time by over 80%. Once the COE is set, then simply "dragging" the application from the pool and "dropping" at the desired level, i.e., a single computer or a group of computers, can automatically deploy any additional software application.

IT Works also delivers a Desktop Lockdown feature that contributed to the success of the project. End users would no longer be able to install software or make system configuration changes. End users could not break their computers and cause unnecessary downtime. The IT Works security model created the ultimate desktop management scenario. "We wanted to reduce the impact of end-user-caused service requests. In fact we planned to eliminate all of these end-user-caused service requests." Upon complete rollout of the managed desktops, service requests were reduced by 75% and end-user-caused service requests dropped to zero.

The project was completed within the planned timetable. The savings and improved support levels funded the purchase of 75 additional computers. Since all system configurations were entered during the preliminary project, the deployment of the 75 new systems was virtually unnoticed by the I.T. staff, as the only work required was to boot each new system to the network. IT Works automatically built the 75 systems to the exact end user state. The end users received their new computers in less than a week after receipt from the vendor, without interruptions historically needed to finalize configurations, missed software installations or lost data. The next system refresh will be just as easy - reboot the computer and let IT Works take over.

Introduction

Our profiled customer, an energy company located in the Los Angeles area, has over 500 desktops and 700 end users to manage on a daily basis. Computers were generally a “clone” consumer line and running the Windows 95 operating system. Applications were numerous (approximately 300) and deployed via logon scripts or manually installed by support staff. The quality of installations was dependent on which staff member installed software (experience and training); standardized installation procedures were not used or maintained. Staffing levels were low, primarily due to economic conditions, and the organization experienced high levels of employment churn. External contactors augmented staff shortages when budgets allowed.

Several major issues negatively impacted the department’s performance in the eyes of its customers – the organizations end users and management. Some of the problems were associated with change management, unauthorized end user initiated changes, limited training time, staff turnover, support policies inconsistent with department or company goals, outdated and non-standard hardware platforms. “We had to make smart changes to improve.”

The project's goal was simple – take a confusing Desktop Management infrastructure and support model and migrate to a Common Operating Environment (COE) consisting of: business line desktop hardware, an enterprise operating system, common applications (primarily Office), virus protection and several internal corporate applications. This would create a managed desktop environment that provided improved levels of support to both end users and management. SMT presented IT Works to the company, explaining how their comprehensive Desktop Management solution would change how they did business within the Information Technology department. The goal of SMT is to provide a comprehensive Desktop Management solution for customers with a positive Return On Investment (ROI) within the first year of implementation.

SMT collaborated with the customer to identify key goals for the project and the desired end state the I.T. manager wanted.

This is what I want – my critical success factors:

- Prevent users from installing software or making system changes (Desktop Lockdown)
- User data and application profile settings must be saved on the network
- Roaming User Profiles – User interface similar on any computer
- Remote Desktop Management – Limited support staff and large dispersed campus
- Integrated solution: deployment, helpdesk, remote support, migration and asset management
- Quick project completion
- Limited on-going vendor support requirements
- Solution must be intuitive and easy to use

Project Planning and Testing

An estimated project plan, including budget, was presented to the company's management team for approval. The project needed support from the company's decision makers before the project started, to ensure that both adequate time and finances were made available. The cost of the IT Works Desktop Management software is only one aspect of a project cost – additional cost elements are: new computer purchases (lease or buy), implementation fees, training, end user downtime, etc. The project return is a commitment to high level of desktop reliability, efficient problem resolution and an overall reduction in operating costs.

Once the project was approved, SMT worked directly with the customer's internal I.T. staff to install and configure IT Works, train the support staff, and deploy the solution to the end users. The IT Works base system was installed and configured within the first three days and initial desktop builds started by the end of the first week. The major project hurdles after the first week were gathering the application software source CD's and identifying the specific desktop software requirements.

End user group testing was essential to know if the solution would satisfy expectations and deliver the critical success factors listed by the customer. A group of ten end users, all within the same department, were selected to test the solution, point out configuration issues and approve the system builds before widespread deployment. The group was located near the testing center so real-time assistance, if needed, would be available. It was obvious from the start that the adoption of the IT Works methodology would change how the I.T. support staff operated. The I.T. staff was now capable of delivering a fully functional COE, deploying applications and remotely managing the computers without interruption to end users.

One of the first lessons learned: as end users discussed their new desktops, they observed that desktop lockdown would change their interaction with their computers. SMT provided a list of advice for end users so they would better understand the benefits, and responsibilities of the I.T. department. A meeting was held with the test group, including management representatives and SMT, which resulted in the first pass at creating service level agreements to meet end users expectations and that were achievable by the I.T. department.

The test group was very active in identifying changes that allowed more flexibility to end users. Most of the recommendations were adopted, integrated into the solution and automatically deployed to the test group. Many other employees that interacted daily with the test group saw the improvements and requested that the test group be expanded. "We were very surprised to see how fast word of mouth carried the project details throughout the organization." Positive response from the test group made the decision easy for widespread rollout – the end users and I.T. were ready.

Deployment and Training

Widespread deployment would require a planned and published rollout schedule that would encompass end user vacations, business meetings and normal business activities. “We depended on SMT’s past implementation experience to help architect our rollout plan.” The overall plan included one-hour end user training classes to cover the automatic creation of user profiles including mail services, review network data storage and review the Service Level Agreement (SLA) for the new desktops. While end users attended the training, support technicians either replaced the old computers with new IT Works managed computers, or migrated existing computers to the new IT Works managed environment. As the end users returned to their work environments, they found the new managed computers ready for use.

In less than four weeks, the customer deployed over 500 computers and trained all end users. The hands-on experience with the I.T. support staff helped to create a positive reinforcement that the desired outcome is a satisfied end user. Each computer was built in the lab, tested with a user logon and then deployed to the final end user’s desk. “We could have deployed faster but we felt the extra time spent with the end users would pay dividends in the future.”

IT Works completes a system build to the end user state in less than one hour. This includes formatting the local hard drive, a native installation of the operating system and all application software. Computers are configured within IT Works by defining an organization level with a specific operating system, application software, policies, permissions and user environment. Generally, this level of configuration is called the Common Operating Environment (COE). “SMT provided us with an out-of-the-box solution for our COE. We basically took the SMT base model and made minor changes to meet our specific requirements.” Once the COE has been established, specific applications are assigned to each computer or groups of computers by “dragging and dropping” applications onto individual computers or computer groups.

Once a computer has been assigned the appropriate software, it can then be managed over its lifecycle. How? IT Works maintains each computer's full configuration within its open database. Any change to the IT Works configuration is automatically deployed to the managed computer, or a new computer can be built in minutes to the exact IT Works configuration. After the database has been configured, building a new computer or simply rebuilding an existing configuration on new computer hardware is as simple as placing the IT Works boot diskette in the floppy drive and rebooting the computer. IT Works always knows what software has been deployed to each of your computers by reviewing a computer or from the IT Works asset management reporting system.

Results

Results are the only real measure of a successful project. Lets look at the critical success factors our client defined at the beginning of the project.

Factors:

- Prevent users from installing software or making system changes (Desktop Lockdown)
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Desktop lockdown was the single most beneficial improvement for reducing the organization's overall operating costs. Service level agreements with end users set expectations. With the infrastructure being identical across the location, service requests were reduced by over 75%. How? The end users cannot make any changes to computers and therefore cannot inadvertently cause system failures. Service requests now show users asking for new business software, restoration of files mistakenly deleted and equipment failures.

Storing end user data on the network, and only the network, proved invaluable when a critical file was accidentally deleted. In the past, end users could store critical data on the network and local file system, and only the network file servers had routine backups. Now, all end users store and access data from the network since read and execute access only is given to local file systems. IT Works desktop lockdown is the most aggressive in the industry, providing high quality second-level security over the installed virus protection software. Private, group access and public data storage shares were created to give end users maximum flexibility to share information.

Roaming user profiles are a feature of the operating system but also provide additional flexibility for end users and support staff. Many company personnel are required to work in multiple site locations during a typical week. By having the same user interface and access to files from anywhere on the network, users have more flexibility, improving moral and productivity.

The support team uses one interface to log support requests, execute problem resolution, notify end users of resolutions and log all support activities. Software deployment is as simple as dragging and dropping applications onto the computer or computer group. Multiple single point solutions and many ad hoc manual procedures were eliminated with IT Works, which further improved the project's return. The I.T. department manager is able to review support requests and response trends and provide better employee career goals and development.

The project completion schedule outperformed the approved plan and was completed under budget. System Management Technologies was directly involved for three weeks with on-site support and limited remote support over the initial six months. All desktops were migrated within the first five months of the project, including thirty notebook computers.

SMT software licensing and maintenance includes all updates to IT Works for the current operating system and service packs as well as future operating systems. The customer started with NT4.0 and is currently planning upgrades to Windows XP and Active Directory. "We are sure the upgrade solution to XP will be easy since the support SMT provides is the best I have experienced." The upgrade process will only require a reboot of the system with a boot diskette to connect to the network. The IT Works system will build the computer to the exact end user ready state. "We expect to rollout the new operating system to the 500 desktops in one week without having to work over time."

Training of the support staff was handled with hands-on work and a scheduled workshop. "I was surprised at the limited amount of time I needed to understand and use the system. SMT has really made this simple, either use the boot diskette or 'right click' on the computer."

SMT expects to provide limited on-going support and has provided a remote support model to handle any issue with customers. "We found SMT's remote support to be cost effective; they can handle any request without traveling to my location."

System Management Technologies (SMT) is a software and services company that offers a comprehensive Desktop Management solution for significantly reduced TCO, improved productivity of I.T. staff, and greater end user satisfaction. IT Works, the company's unique flagship product, has been proven in demanding I.T. environments for over 5 years, delivering proactive management of desktops, servers and notebooks. With proven methods, techniques and best practices also offered by SMT, IT Works is a must-have solution for ultimate desktop management. This powerful combination helps I.T. departments achieve immediate, continuous cost and time savings, while dramatically improving availability of computers and applications.

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