

White Paper: Microsoft[®] SMS and Lieberman Software Corporation Utilities

Rev 2 – June 1, 2006

Lieberman Software Corporation
<http://www.liebsoft.com>

Abstract

Many administrators are misinformed about the capabilities of Microsoft[®] SMS (Systems Management Server). Because of its many capabilities, many administrators are under the impression that no other tools are necessary. In this paper we will point out the strengths and weaknesses of SMS and show how third party tools such as those from Lieberman Software Corporation are still necessary for the smooth operation of any IT shop.

Contents

1. Background	3
2. Lieberman Software Corporation vs. Microsoft SMS	3
3. Service Management with SMS	3
4. Managing Scheduled Tasks with SMS	4
5. Local Machine SAM Management	5
6. Why Buy User Manager Pro	6
7. Summary	7

1. Background

So, what does SMS actually do? From Microsoft's own web site, the functions of SMS are:

- **Software Distribution** – SMS deploys applications, software updates and operating systems.
- **Asset Management** – SMS discovers and tracks software and hardware assets (type of hardware and software installed). It also performs software metering.
- **Remote Troubleshooting** – SMS includes a suite of tools to monitor remote system health and help IT administrators troubleshoot and repair problems.

The architecture of SMS relies on Microsoft SQL Server as its backend database and requires one or more high performance machines. The SMS machines perform any scheduled software updates in addition to constantly sweeping the network (this process is called "resource discovery") and searching for machines, users and groups. Based on this information additional software distributions and upgrades are performed.

SMS provides Tools for Network Administration¹:

- View and control remote computer keyboard and mouse
- Run commands on the a client computer
- Transfer files to/from client computer
- Restart client computer
- Chat with client on a remote client
- View client computer configuration

SMS integrates with Windows 2000 Group Policies:

- **Folder Redirection** – On logout user folders can be synchronized with a central server
- **Logon/Logoff Scripts** – Can be activated on a user, group, machine, membership or OU basis
- **Software Installation** - Installations are based on inheritance from active directory tree
- **Security Settings** – Can set permissions on files, folders, directories, registry and system services based on location in active directory tree
- **Administrative Templates** – allows the application of templates to modify access to the operating system, desktop, menus and to modify registry keys/values.

2. Lieberman Software Corporation Applications vs. Microsoft SMS

With all of the functionality just listed, it may indeed seem like there is no need for any additional software to take care of the management of workstations and servers. The truth is that SMS leaves many critical holes in its administrative fabric.

3. Service Management with SMS

There are no management or reporting functions for remote client services in SMS. Even with the advancement of Windows 2000, Active Directory and Group Policies, there is nothing in all of this new technology for handling the mass management of system services.

If an administrator needs to remove services, change service accounts, update service logon cache, restart services, or modify rights or memberships for service accounts, SMS has nothing to offer. As part of a well-designed security plan, domain and other administrator accounts should be changed on a regular basis on all the machines within an organization. This is particularly important when an

¹ From: "Administering SMS", Mark Wilkins, McGraw-Hill, 2000

Administrator leaves an organization—all of the backdoor security credentials must be changed. Again, SMS offers nothing to help with this requirement.

Lieberman Software's **Service Account Manager™** (Figure 1) tackles all aspects of client and server service management. The program reports on all services on all machines on a single console. Full sorting and selection allows any or all services on multiple machines to be changed in minutes. The program can also be used to manage the services used by SMS on both the servers and clients.

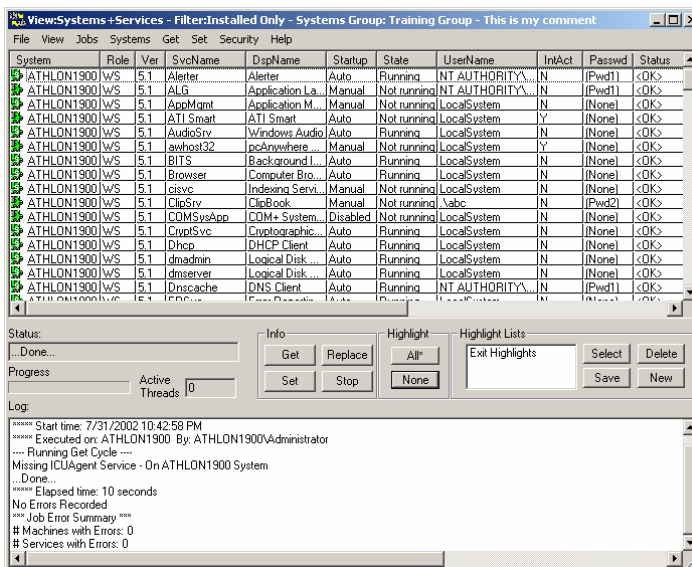


Figure 1: Screenshot from Service Account Manager

Reporting from the program can be exported directly into the SQL Server database used by SMS. There is no need for SQL Server in the operation of this product.

4. Managing Scheduled Tasks with SMS

Every workstation, server and domain controller has a scheduled tasks folder. This folder contains a list of all of the scheduled programs that are setup for each machine. Unfortunately there are no functions within SMS, Windows 2000, Active Directory, or Group Policies for managing this critical resource. The tragic part of this void is that SMS may install applications that create tasks in the Scheduled Tasks folders, but from that point on SMS becomes permanently unaware of the created tasks.



Lieberman Software's **Task Scheduler Pro™** is designed to fill this gap. This product reports on and allows the management of all scheduled tasks on all machines from a single console (see figure 2). This program can add, delete and update tasks on Windows NT, 2000, XP and .NET servers.

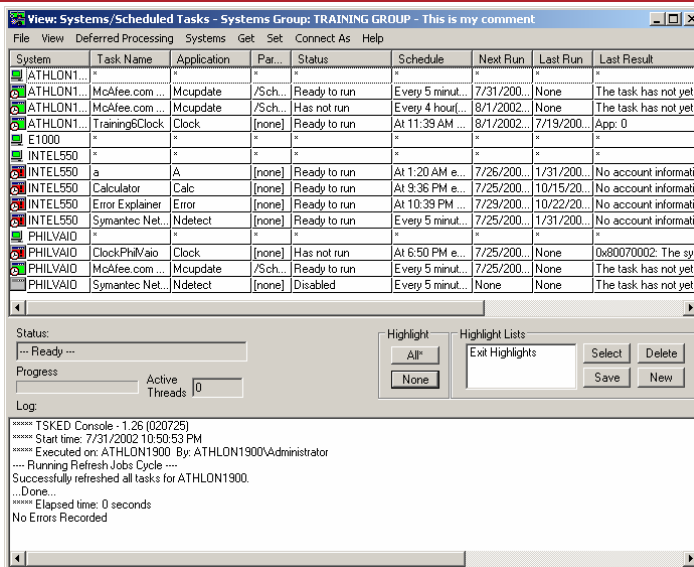


Figure 2: Screenshot from Task Scheduler Pro

5. Local Machine SAM Management

An administrator faced with having to add, update, or change a built-in or local account/password on all systems has no tools within SMS to handle the job. Adding groups, changing memberships, or modifying auditing among other tasks is simply not provided within the scope of SMS. There is no local account, group membership or general-purpose registry reporting within SMS. Most all of the user and group functions are based on domain users and groups.

To solve the weaknesses of SMS in the management of local systems and servers, Lieberman Software's **User Manager Pro™** makes mass changes (see figure 3) to the local SAM of workstations, servers and domain controllers. It is designed to make the same change to all machines in the shortest possible amount of time. It provides a variety of actions such as add, update (only change selected fields), delete, delete all except, move all except, swap lists and more. Categories of change include: users, groups, memberships, auditing policies and the registry (keys, values and permissions). It also provides a wide variety of consolidated reports on the local SAM of all machines in a single list.

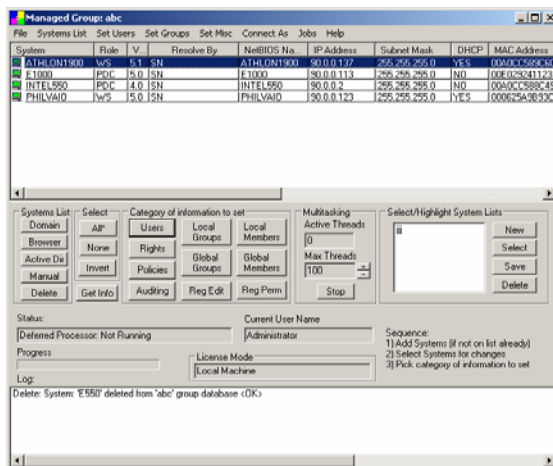


Figure 3: User Manager Pro

As opposed to SMS, User Manager Pro supports any topology of domains, workgroups, and Windows 2000 Active Directory domains concurrently by means of a built-in unlimited concurrent impersonation feature (see figure 4). There is no need for remote agents with User Manager Pro.

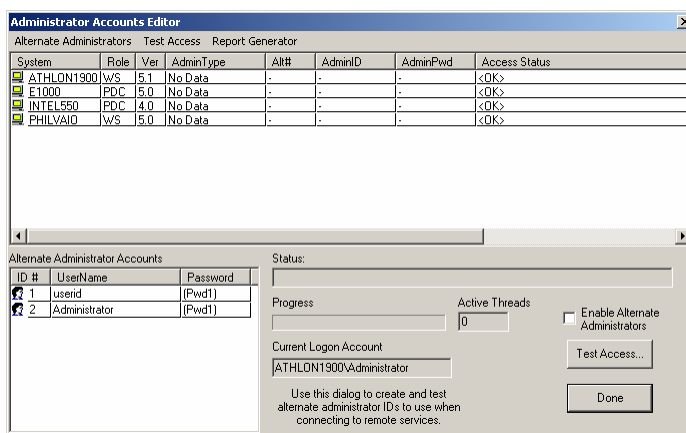


Figure 4: Unlimited Impersonation in User Manager Pro

When changes need to be made, User Manager Pro performs its work immediately. Any off-line machines are retried at periodic intervals (5 minutes is the default). It also meters down activity when retrying to minimize the possibility of swamping the network. Most operations can be completed on thousands of machines in just a few minutes. Compare this performance to that of SMS where changes can take up to 23 hours to take effect. If a security incident needs immediate rectification by changing the machines in an organization, SMS is simply not the right choice if a third party solution can accomplish the task in minutes.

6. Why buy User Manager Pro when I could just write scripts and MSI packages?

An SMS administrator could argue that they could write the same functions performed by User Manager Pro by the creation of scripts and Resource Kit applets. The resulting combination can be packaged into installable MSI packages. This is true...however; you'll be opening up a can of worms. Consider the time to prepare the MSI packages for SMS including creation, debugging/testing, documentation, and on-going management.

Also an administrator considering a 'roll-your-own' solution needs to understand that the applets provided in the Microsoft Resource Kit are unsupported, limited in function, and have little in the way of code to handle exceptional cases that do occur in complex networks. Commercial applications such as User Manager Pro contain a large body of proprietary workarounds for undocumented failures that are known to occur within the operating system. Roll-your-own solutions find themselves working most of the time, but may misbehave at the worst times with little to no notification. In a mission critical environment, organizations want to be able to use the most powerful and appropriate tool for the job without having to call the author of an MSI script in the middle of the night because 'something is not working quite right.'

So in this case, SMS really provides little other than a transport of scripts and applets to the machines within an organization. The hard work still needs to be done by a programmer or by purchasing a third-party product to do the job.

Look at all of the reports that SMS has – I don't see why I need User Manager Pro

Yes, SMS has a LOT of reports. All reports are based on SQL queries performed on the local database containing information remotely collected hours or days ago on the machines that were scanned. The nature of the data in the SMS database is about machine software and hardware inventories, statistics on performance, and the status of software distribution packages. The SMS database has no information such as user accounts, groups, memberships, auditing, or ad hoc retrieval of any registry key, value or branch. The beauty of User Manager Pro is that its information can be exported to the SQL Server database used by SMS for queries that enhance the capabilities of SMS.

7. Summary

Nothing in this white paper should imply that SMS is not an excellent product. Our point of view is to point out that even with all of its capabilities; SMS leaves many critical management features out. These missing management functions can be performed by a variety of excellent third-party tools.

Another fact to consider is that third-party tools are in general, significantly faster than SMS because they do not do software distribution, performance monitoring or the automatic discovery of systems. Because of the scope of SMS, response times are necessarily slower than special purpose management tools. Considering that SMS may have very slow updates (as long as 23 hours² or longer in some scenarios) to remote system, in time critical scenarios, third-party solutions are the only way to go.

Our support staff is available to answer your technical questions whether you are a customer or not.

Voice: 800.829.6263 (USA/Canada) Voice: (01) 310.550.8575 (Worldwide) Fax: (01) 310.550.1152 (Worldwide)
Web: www.liebsoft.com Email: support@liebsoft.com



² From: "White Paper: Remote Diagnostics with Systems Management Server Version 2.0", 1999, Microsoft Corporation. "Have you waited long enough? During normal operation of Systems Management Server, updates to client agent configuration are passed to the client only every 23 hours." Page 58.