

# Special Operations Software Specops Deploy and Microsoft SMS 2003

## Comparison of two technologies Whitepaper version 1.1

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### Introduction

At first glance, choosing System Management Server 2003 (SMS) might appear to be a straightforward decision. Many companies have SMS "included" in their license agreement with Microsoft. However, charging forth and implementing SMS without investigating alternative solutions could become a costly decision. Paradoxically, very few companies perform testing and evaluation of alternative solutions, claiming that it is too expensive and time consuming. In this paper we will help IT Professionals and business decision makers to understand the key differences between an SMS managed network and a Group Policy managed network where Group Policy Software Installation (GPSI) is replaced with Specops Deploy.

With the introduction of Windows 2000 and Active Directory, for the first time a software management mechanism was built into the Windows operating system. This method, built using Active Directory Group Policies, is a very efficient way of administering software since it is based on a policy instead of direct actions. The policy defines the software that should be managed, which versions are active, transforms and patches used etc. After receiving the policy the client computer determines how to handle different situations so that it complies with the policy. However the Group Policy Software Installation (GPSI) has limitations. More often than not, large organisations need to re-evaluate their decision to use this technology and look at other solutions like System Management Server 2003.

### What is Group Policy and Group Policy Software Installation (GPSI)?

Group Policy simplifies tasks such as setting user profiles, managing desktops and systems. Group Policy extends administrative control and reduces redundant management tasks. As a result, existing IT resources can be used more efficiently, thus administrative costs can be reduced across organisations. By using Group Policy to standardise the end users' computing environment, support costs are reduced while user productivity and satisfaction are increased.

Group Policy Software Installation (GPSI) is an extension of Group Policy used to deploy managed software throughout its life cycle within the organisation. Group Policy Software Installation works in conjunction with Group Policy and Active Directory.

### What is Specops Deploy?

Specops Deploy is designed to overcome the existing limitations when using GPSI in AD/GP/IntelliMirror. Specops Deploy enables large/medium sized organizations, that require more advanced software deployment capabilities such as scheduling, targeting, surveying and reporting, to benefit from the advantages of policy based management. Specops Deploy also makes it possible for organisations to deploy software over weak network links for example, to home users, roaming laptops or small branch offices. Specops Deploy can also deploy legacy setups, such as setup.exe, and use Wake On LAN (WOL) to deploy software during off-hours when computers are normally turned off. Issues like these have historically been showstoppers for many organisations interested in using Group Policy for Software Deployment.

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## **What Is Systems Management Server 2003 (SMS)?**

Systems Management Server 2003 is one of the more complex products in the Microsoft portfolio. It is a desktop management tool built on the same architecture as Systems Management Server 2.0 with distribution points, management points, client access points, server location points, site servers and a primary site server. It provides features such as hardware/software inventory, software distribution, software metering and remote control. The legacy from Windows NT4 offers support for older Microsoft systems such as NT4 and windows 95/98. However, this fact also means that the product is not fully optimised for windows 2000 and later.

### **Comparing technologies**

Specops Deploy uses a pull model for software deployment. This provides a highly dynamic solution that makes software available to users as it is needed, installing software just in time or as scheduled software deployments; even arranging for off-hours distribution and installations. Specops Deploy works and scales with the design of your Active Directory and its DFS Servers.

Systems Management Server on the other hand uses a push model to deploy software to computers or to distribution points, where it can then be locally pulled down onto a computer either by the user or through use of IntelliMirror. Systems Management Server works with its own infrastructure including distribution points, management points, client access points, server location point site servers and a primary site server. To determine how many servers are really needed is complex even for an experienced Microsoft System Management Server consultant. When the number of nodes increases, the need for additional components increases as well and more servers have to be purchased. By default, Systems Management Server installs all its services on a single system. However, this configuration is suitable only for locations with relatively small numbers of managed clients. In larger deployments, administrators will need to add additional dedicated servers to the site. On the other hand, implementing Specops Deploy is a very streamlined task as the required infrastructure (Active Directory) is already in place.

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## Active Directory Schema extension required?

In order to optimize the package delivery in a network with roaming laptop clients, Systems Management Server needs to populate the Active Directory schema with localisation data. In order to do this, System Management Server needs to extend the Active Directory schema. This is a non-reversible and permanent change to the schema that must be carefully considered before being executed. Specops Deploy on the other hand does not require such a schema extension.

The following table is a comparison of Intellimirror with Software Installation, Intellimirror with Specops Deploy and Microsoft Systems Management Server.

Management Function	Intellimirror with Software Installation (GPSI)	Intellimirror with Specops Deploy	Microsoft Systems Management Server (SMS)
Patch and upgrade Windows XP, Windows Server 2003, and Windows 2000	Limited	YES	YES
Install legacy setups such as setup.exe	No	YES	YES
Installations over weak network links or VPN	No	YES	YES
Perform advanced deployment, troubleshooting, and diagnostic tools	Limited	YES	YES
Manage environments that are not Active Directory-based	No	No	YES
Installations in the background during runtime	No	YES	YES
Installations on system during boot	YES	YES	No
Installations on users during login	YES	YES	No
Wake on LAN software installations	No	YES	No
Native Windows Installer Error messages and reporting	No	YES	No
Real-time reporting of software deployments	No	YES	No
Architecture based on AD domain structure	YES	YES	No

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## **Cost of ownership**

Maintaining and managing desktop computers has become the most expensive part of owning a network. Consequently, the most important aspect to compare when evaluating different Desktop Management products is the cost of future management and maintenance. A quick read of the installation documentation paints a good picture of the complexity of SMS. Completing a successful installation requires planning, patience and perseverance. SMS is intended mainly as a platform or infrastructure product; almost all client-side changes must be done with custom-written scripts deployed using the Systems Management Server software distribution feature. Therefore the need for extensive classroom training and consultants will be an ever existing issue in an organisation running SMS. The need for classroom training also reduces the possibility to divide and delegate management tasks in the organisation. In sharp contrast, Specops Deploy is built to be easy to use and fast to implement. Using the existing infrastructure, Specops Deploy does not require any time for additional architectural design considerations other than what the organisation has already invested in the Active Directory and DFS servers. If the Active Directory is in place, the administrators will have Specops Deploy running and deploying software within hours. By comparison, designing and implementing an SMS infrastructure requires substantial investment in hardware, consultants and transfer of knowledge before being able to achieve a scalable, reliable and efficient software distribution system.

## **Bottom line**

In the end, it's all about features, ease of use and reduction of costs over time. SMS is suited for large organisations with a need to support down-level operating systems such as Windows 95/98, Windows NT and in organisations with limited knowledge of Active Directory. Specops Deploy on the other hand is suited for organisations using Group Policy and Active Directory. SMS is not the best solution in a large network where nodes and software application diversity is high due to the increasing complexity and costs in design and maintenance. Specops Deploy is the better choice when a more dynamic solution is required and when the network is standardised on clients to Windows 2000 (and later).

**Before the decision is made on a specific Software deployment solution, we strongly recommend the decision maker to.**

- Calculate the cost of administering the different solutions over time
- Compare the gains in productivity, availability, and efficiency
- Ascertain the investment needed to purchase and setup the chosen solution and the associated training costs
- Calculate the payback period

**We end this paper with a 200 year old quote of wisdom, well suited for the IT managers of today:**

"By failing to prepare, you are preparing to fail." Benjamin Franklin (1706 - 1790)

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