



System Migration Assistant
Version 2.1
User Guide

Note:

Before using this information and the product it supports, read the information in "Notices" on page 193

Fourth Edition (March 2000)

This edition replaces XX99-9999-99.

© Copyright International Business Machines Corporation 1996, 2000. All rights reserved

Note to U.S. Government Users — Documentation related to restricted rights — Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract with IBM Corp.

Table Of Contents

TABLE OF CONTENTS	III
TABLE OF FIGURES	9
CHAPTER 1. ABOUT THIS USER'S GUIDE	11
1.1 How To Use This Guide	12
1.2 Who should read this Guide	12
1.3 Conventions and terminology used in this book	13
1.3.1 Notices	13
1.3.2 This book uses the following terminology conventions unless otherwise noted:	13
1.3.3 The following text conventions are used	13
1.3.4 Using Syntax Diagrams	14
1.4 Prerequisite and related information	17
1.5 How to send your comments	18
CHAPTER 2. SUMMARY OF CHANGES	19
2.1 System Migration Version 1.0 characteristics	19
2.2 System Migration Version 2.0 characteristics	19
2.3 System Migration Version 2.1 characteristics	19
CHAPTER 3. WHAT SYSTEM MIGRATION ASSISTANT CAN DO FOR YOU	21
3.1 Introducing System Migration Assistant	21
3.2 Types of Migrations	22
3.2.1 Mass Migration	22
3.2.2 Selective Migration	23
3.3 Migrating Standard work environments	24
3.3.1 Singular	24
3.3.2 Network Wide	24
3.3.3 Enterprise Departmental	26
3.4 Automating SMA with IBM's LCCM	27
3.4.1 IBM's LCCM	27
3.4.2 SMA and LCCM	27
CHAPTER 4. OBJECTS THAT YOU CAN MIGRATE	29
4.1 Personality Settings you can migrate	29
4.2 Personality Settings you cannot migrate	30
4.3 Connectivity Settings you can migrate	30
4.4 Application software	31
4.5 Registry Settings	31
4.6 Files	31

CHAPTER 5. UNDERSTANDING HOW SMA WORKS	33
5.1 SMA includes the following programs:	33
5.2 System Migration Assistant migrates the custom-working environment of one computer to another in two phases.	33
5.3 The types of migrations you can do	34
5.3.1 Mass Migration	34
5.3.2 Selective Migration	34
5.4 You can use SMA with Interactive or automated sessions	34
5.4.1 Interactive	34
5.4.2 Non-interactive	35
CHAPTER 6. REQUIREMENTS, SUPPORTED OPERATING SYSTEMS & HARDWARE	37
6.1 Requirements	37
6.2 Supported Operating Systems	38
6.3 Supported Hardware	39
CHAPTER 7. INSTALLING SMA	41
7.1 Overview	41
7.2 Concepts	41
7.3 Requisites	42
7.3.1 SMA Folder Locations	42
7.3.2 Obtain System Migration Assistant Version 2.1 Software	43
7.4 Planning SMA Installation	43
7.5 Reinstalling SMA	44
7.6 SMA Installation Program	45
7.6.1 Starting the installation program	45
7.7 System Migration Assistant Setup Welcome screen	46
7.7.1 Software License Agreement.	47
7.7.2 Select name for SMA Program folder in Window's Start menu.	51
7.7.3 Installation Finished	52
7.7.4 Review that SMA Installation was Successful	53
CHAPTER 8. REMOVING SMA FROM WINDOWS	55
CHAPTER 9. USING SMA TO CAPTURE COMPUTER PROFILE TO MIGRATE	55
9.1 Overview	55
9.2 Concepts	55
9.2.1 Interactive or automated sessions	56
9.2.2 Registry Keys	56
9.2.3 Type of Migration	56
9.3 Planning to capture a profile to migrate	58
9.3.1 Application Software Settings	58
9.3.2 Windows Personality Settings	58

9.3.3	Drive, Folder, and file considerations	60
9.4	Using SMA SOURCE application for Selective & Mass migrations	62
9.4.1	Overview	62
9.4.2	Concepts	62
9.4.3	Requisite information prior to making a migration profile	65
9.4.4	Using SOURCE to do a Selective migration	66
9.4.5	Using SOURCE to do a Mass migration	95
9.5	SMA Batch Mode – Using SRCBAT	113
9.5.1	Batch Overview	113
9.5.2	Concepts	115
9.5.3	Requisite information prior to making a migration profile	115
9.5.4	Working with SRCBAT input command file	115
9.5.5	Using SRCBAT	116
CHAPTER 10. MIGRATING YOUR COMPUTER PROFILE TO OTHER COMPUTERS		117
10.1	Overview	117
10.2	Concepts	117
10.2.1	Interactive or automated sessions	117
10.2.2	Registry Keys	118
10.2.3	Type of Migration	118
10.3	Requisites	119
10.4	Clean up of target computer Registry	119
10.5	Using SMA TARGET Computer Migration GUI	119
10.5.1	Overview	119
10.5.2	Concepts	120
10.5.3	TARGET	121
10.6	SMA Batch Mode – using TARBAT	137
10.6.1	Batch Overview	137
10.6.2	Concepts	138
10.6.3	Requisites in applying migration profile	138
10.6.4	Working with TARBAT input command file	139
10.6.5	Using TARBAT	139
CHAPTER 11. SRCBAT COMMANDS		141
11.1	List of available SRCBAT Commands you can use	141
11.2	; - COMMENTS	143
11.3	[TSM_START]	144
11.4	[CAPTURE_NTFS_ATTRIBUTES]	145
11.5	[CONNECTIVITY_START]	146
11.6	[EXCLUSION_DRIVE_START]	148
11.7	[EXCLUSION_FILE_START]	149
11.8	[EXCLUSION_FOLDER_START]	150
11.9	[INCLUSION_DRIVE_START]	151
11.10	[INCLUSION_EXTENSION_START]	152

11.11	[INCLUSION_FILE_START]	153
11.12	[INCLUSION_FOLDER_START]	154
11.13	[OUTPUT_LOCATION]	155
11.14	[PERSONALITY_START]	156
11.15	[REGISTRY_START]	158
11.16	[SELECTIVE_EXCLUSION_FILE_START]	159
11.17	[SELECTIVE_EXCLUSION_FOLDER_START]	160
11.18	[TRANSFER_MODE]	161
11.19	[USER_EXIT]	162
CHAPTER 12. TARBAT COMMANDS		163
12.1	List of available TARBAT commands	163
12.2	[TSM_START]	164
12.3	[COMPUTER_NAME]	166
12.4	[DOMAIN_WORKGROUP]	167
12.5	[GATEWAY]	168
12.6	[SUBNET]	169
12.7	[TCPIP]	170
12.8	[USER_EXIT]	171
CHAPTER 13. SRCBAT PROGRAM SYNTAX		172
CHAPTER 14. TARBAT PROGRAM SYNTAX		175
CHAPTER 15. MIGRATING OS/2 COMPUTER PROFILES TO WINDOWS PC'S		177
15.1	Summary	177
15.2	Settings that SMA can transfer	177
15.3	The migration of settings from OS/2 to Windows takes two steps.	177
15.4	Making a profile using OS/2 Persys	177
15.5	Migrating OS/2 profile to Windows	178
CHAPTER 16. AUTOMATING SMA FURTHER USING IBM'S LCCM		179
16.1	Overview	179
16.2	Obtaining LCCM	179
16.3	Example on Target computer	179
16.3.1	Requisites	179
16.3.2	Instructions	180
CHAPTER 17. APPENDIX A USER ASSISTANCE		183

17.1 SMA Support	183
17.2 User Support Forum	183
CHAPTER 18. APPENDIX B RELATED PUBLICATIONS	185
18.1 International Technical Support Organization Publications (Redbooks)	185
18.2 Redbooks on CD-ROMs	185
18.3 Other Publications	185
CHAPTER 19. APPENDIX C BATCH EXAMPLE	187
CHAPTER 20. NOTICES	193
20.1 Trademarks	194
GLOSSARY	197

Table of Figures

Figure 3-1 Complete Migration of all Applications running under Windows, the Windows Desktop Environment & Settings, etc.	23
Figure 3-2 Selective migration of Windows desktop personality, connectivity, file & folders	24
Figure 3-3 Migrate standard work environments through the country.	25
Figure 3-4 Migrate predefined work environment to the enterprise.....	26
Figure 7-1 Process flow of the installation program	42
Figure 7-2 System Migration Assistant (SMA) icon as seen from Windows Add/Remove Programs.	45
Figure 7-3 SMA setup program Welcome Screen	46
Figure 7-4 Review IBM's software license agreement.....	47
Figure 7-5 Review and choose folder location for SMA files.	48
Figure 7-6 Choose SMA destination folder location.....	49
Figure 7-7 Choose network folder location for SMA.	50
Figure 7-8 Add SMA to Window's Program Folder	51
Figure 7-9 SMA installation completed.	52
Figure 9-1 Windows-based SMA process flow	65
Figure 9-2 Starting SMA from Windows taskbar.....	67
Figure 9-3 Close all applications before running SMA.....	68
Figure 9-4 System Migration Assistant Introduction Screen.....	69
Figure 9-5 Information Screen on Selecting Migration Type.....	70
Figure 9-6 Select Migration Type.....	71
Figure 9-7 Option to select to migrate Windows Desktop & Personality Settings	72
Figure 9-8 Option to migrate Connectivity Settings	73
Figure 9-9 Option to migrate files based on file extensions	74
Figure 9-10 Option to select individual drives, folders, and/or files to migrate.....	75
Figure 9-11 Screen to select Windows Personality Settings to migrate	76
Figure 9-12 Select Connectivity Settings to migrate.....	78
Figure 9-13 SMA will build a list of folders and files to work with	80
Figure 9-14 SMA completed scan of drives, folders, and files.....	81
Figure 9-15 Select files to migrate by file extension.....	82
Figure 9-16 Review the files selected by file extension	84
Figure 9-17 Select drives, folders, and/or files to migrate.....	86
Figure 9-18 Warning message if drive other than "c:" is selected.	87
Figure 9-19 Set disk drive(s) location, and filenames of SMA output migration files.	88
Figure 9-20 The files selected for migration are in use by another process.....	90
Figure 9-21 Close all applications before running SMA.....	99
Figure 9-22 System Migration Assistant Introduction Screen.....	100
Figure 9-23 Information Screen on Selecting Migration Type.....	101
Figure 9-24 Select Migration Type to Mass Migration.....	102
Figure 9-25 Option to select files & folders.	103
Figure 9-26 SMA will scan files.....	104
Figure 9-27 Scan of files & folders completed.	105
Figure 9-28 Select disk drives, folders and/or files to migrate.	106
Figure 9-29 Set the folder path where SMA will be installed to.....	108
Figure 9-30 Confirm to SMA to begin writing computer profile to migrate.	110
Figure 9-31 SMA provides a summary of the first phase.....	112
Figure 9-32 SRCBAT process	113
Figure 10-1 SMA validate quit	121
Figure 10-2 Close all applications before running SMA.....	124
Figure 10-3 SMA TARGET introduction screen.....	125
Figure 10-4 Define where SMA migration profile file pathname is.	126
Figure 10-5 SMA migration configuration file info screen.	128
Figure 10-6 Source and Target computer drive conflict.....	132

Figure 10-7 Confirm to SMA to begin migration to target computer. 134
Figure 10-8 SMA - transfer finished summary screen. 136

Chapter 1. About this User's Guide

This *User Guide* will help you become knowledgeable with IBM's System Migration Assistant. Instructions on how to install and use IBM System Migration Assistant are given. Examples and procedures are included in the guide that demonstrates the use of this product.

The User Guide structure is as follows:

- Chapter 2, "Summary Of Changes", explains what is new in System Migration Assistant Version 2.0 and Version 2.1, changes and differences in the programs, and other information that user's of Version 1.0 and 2.0 need to know.
- Chapter 3, "What System Migration Assistant can do for you," contains an introductory overview of the purpose and features of System Migration Assistant.
- Chapter 4, "Objects that you can migrate", discusses what you can and cannot migrate.
- Chapter 5, "Understanding how SMA works", informs you about important concepts in understanding System Migration Assistant.
- Chapter 6, "Requirements, Supported Operating systems & Hardware", explains tasks and knowledge required before installing or using SMA. Lists of supported operating systems and hardware, as well as IBM hardware are enclosed.
- Chapter 7, "Installing SMA", gives instructions on where to obtain SMA, and how to install it.
- Chapter 8, "Removing SMA," shows how to remove SMA from your system.
- Chapter 9, "Using SMA to capture computer profile to migrate", provides step by step instructions in using SMA create a profile list of objects from a originating computer to transfer to other computer(s). These objects include application software, windows desktop, personality, and connectivity settings. The profile list contains drives, folders and files that are to be migrated as well to other computers. Instructions demonstrate the use of SMA by either using a Windows interface or using batch programs to create this profile.
- Chapter 10, "Migrating computer profile to other computer(s)", gives instructions on migrating a computer profile created by the steps in Chapter 11 to other computer(s). Methods show how to migrate either by unattended batch programs or by using an interactive Windows program.
- Chapter 11, "SRCBAT Syntax", shows syntax for the SRCBAT program.
- Chapter 12, "SRCBAT Commands" shows each command and syntax.
- Chapter 13, "TARBAT Syntax", shows syntax for the TARBAT program.
- Chapter 14, "TARBAT Commands" shows each command and syntax.
- Chapter 15, "Migrating OS/2 computer profiles to Windows PC's," shows how OS/2 settings can be migrated to Windows operating systems using IBM Persys with SMA.
- Chapter 16, "Automating SMA further using IBM LCCM" provides systematic procedures for using System Migration Assistant with IBM LANClient Control Manager (LCCM) for advanced Life-cycle product deployment.
- Chapter 17, "Appendix A User Assistance" tells how to get technical support for using SMA. This appendix provides information on the SMA User's Forum and its web site.
- Chapter 18, "Appendix B Related Publications", provides additional sources of information on related topics, such as IBM Universal Manageability tools, Total Cost of Ownership, Tivoli Storage Manager (TSM), LCCM, and other topics.
- Chapter 19, "Appendix C Batch Example", demonstrates how to use SRCBAT and TARBAT programs together.
- Chapter 20, "Notices" provides important copyright and trademark information. It also discusses other legal information about this document.

1.1 How To Use This Guide

This guide can help you understand the capabilities, functions and processes of IBM System Migration Assistant before installing the program.

In using the System Migration Assistant product, this guide is most effective when used in the following order:

1. Review Chapters 3, 4, and 5 to become more familiar with the concept and abilities of System Migration Assistant
2. Obtain a copy of System Migration Assistant. Download the System Migration Assistant program from the World Wide Web, if you have not done so already.
3. Review Chapter 7 and install System Migration Assistant, following the instructions.
4. Review Chapter 9 to understand the procedures for making a migration profile. After you understand which process is good for you and the procedures involved, have SMA make a migration profile of objects to transfer to other computer(s).
5. After you have made a migration profile, examine the material given in Chapter 10. Then have System Migration Assistant transfer the chosen software applications, desktop and personality settings, connectivity settings, folders & files to the computer(s) you wish using the migration file you created.
6. Included in Chapter 16 is an example of using System Migration Assistant with IBM LANClient Control Manager. This example is for those who are already familiar with the LANClient Control Manager product.

1.2 Who should read this Guide

This guide is for users to understand the concepts and features of System Migration Assistant. Systematic procedures help users with this product.

To use this guide, you need knowledge of Microsoft Windows. Alternatively, be able to find information in Window's documentation.

You should be able to adjust and customize the following Windows settings:

- Desktop (Colors, Icons, Wallpaper, Windows metrics, etc.)
- Personality (Display, Keyboard, Mouse, Sound, etc.)
- Connectivity (Network, RAS, Network computer name & address)

You need to have experience in installing software applications, adjusting network settings, as well as working with files & folders.

IBM designed System Migration Assistant for system administrators to save substantial time and money. The home IBM PC user can benefit as well, using SMA to move their customized PC software and desktop personality to a new computer.

1.3 Conventions and terminology used in this book

1.3.1 Notices

ATTENTION: This product makes changes to the Windows Registry. Registry settings affect the way Windows does things, if you are not careful you can completely disable or destroy things on your system. Your Windows system may no longer work if you alter registry settings. You need to have extreme caution in changing or modifying the registry. Those who have strong expertise in using Windows Registry should only attempt this. Make a backup of your system prior to using this product.

ATTENTION: Only run one SMASETUP program at a time on one computer. Do not run multiple instances of SMASETUP on one computer. If you run more than one copy, you may **corrupt** your computer system.

NOTE: This product allows for the migration of a Microsoft Windows desktop personality and network connectivity to another client system. However, use of this product does not grant any additional license to copy, install, or use any other application software or operating system not already granted by existing licenses.

1.3.2 This book uses the following terminology conventions unless otherwise noted:

SMA 2.1 refers to System Migration Assistant Version 2.1 or later.

LCCM refers to LANClient Control Manager Version 2.5.1.

OS/2 refers to IBM's graphical operating system.

TSM refers to Tivoli Storage Manager

Windows refers to Microsoft Windows.

1.3.3 The following text conventions are used

Bold Bold print indicates choices made from a menu or action bar.

Italics Italics introduces new terms in the text and indicates variables.

UPPERCASE Uppercase letters are used for commands, and for folder, device, and file names.

Example Monospace type indicates system messages and panel or command text.

1.3.4 Using Syntax Diagrams

This section describes how to read the syntax diagrams for each command contained in this manual. To read a syntax diagram, follow the path of the line. Read from left to right and from top to bottom.

The >>---- symbol indicates the beginning of a syntax diagram.

The ---> symbol, at the end of a line, indicates that the syntax diagram continues onto the next line.

The >--- symbol, at the beginning of a line, indicates that a syntax diagram continues from the previous line.

The --->< symbol indicates the end of a syntax diagram.

Syntax items (for example, a keyword or variable) may be:

Directly on the line (required)

Above the line (default)

Below the line (optional)

Note: SMA uses INI file syntax in referencing commands in brackets “[]”. In SMA command files, the use of brackets does not mean optional. Brackets are required as part of the command name in command files. Standard conventions used in this document for batch programs use brackets to denote optional values.

Syntax Diagram Description	Example
<p>Abbreviations: Uppercase letters denote the shortest acceptable abbreviation. If an item appears entirely in uppercase letters, it cannot be abbreviated. You can type the item in uppercase letters, lowercase letters, or any combination. In this example, you can enter CMDNA, CMDNAM, or CMDNAME in any combination of uppercase and lowercase letters.</p>	<pre>>>----CMDName-----><</pre>
<p>Symbols: You must code these symbols exactly as they appear in the syntax diagram for command files.</p>	<pre>[] brackets = Equal Sign _</pre>

	<p>Underscore</p> <p>;</p> <p>Semi-Colon</p>
<p>Variables: Highlighted lowercase items (<i>like this</i>) denote variables. In this example, <i>var_name</i> represents a variable you must specify when you code the CMDNAME command.</p>	<pre>>>---CMDName---var_name-----><</pre>
<p>Repetition: An arrow returning to the left means that the item can be repeated. A character within the arrow means you must separate repeated items with that character. A footnote (1) by the arrow refers to a limit that tells how many times the item can be repeated.</p>	<pre> ----- ↓ >>-- repeat--+----->< . ----- ↓ >>-- repeat -+----->< . ----- ↓ (1) >>----- repeat -+----->< </pre>
<p>Required Choices: When two or more items are in a stack and one of them is on the line, you <i>must</i> specify one item. In this example, you must choose CMDNAME=A, CMDNAME=B, or CMDNAME=C. Do not include any blanks immediately before or after the equal sign (=).</p>	<pre>>>--CMDName==--+A+----->< +-B-+ '-C-'</pre>
<p>Optional Choice: When an item is below the line, the item is optional. In this example, you can choose CMDNAME=A or nothing at all. Do not include any blanks immediately before or after the equal sign (=). When two or more items are in a stack below the line, all of them are</p>	<pre>>>+-----+----->< '-CMDName====A--'</pre> <pre>>>+-----+----->< '-CMDName====+A+--' +-B-+ '-C-'</pre>

<p>optional. In this example, you can choose CMDNAME=A, CMDNAME=B, CMDNAME=C, or nothing at all. Do not include any blanks immediately before or after the equal sign (=).</p>	
<p>Defaults: Defaults are above the line. The system uses the default unless you override it. You can override the default by coding an option from the stack below the line. In this example, CMDNAME=A is the default. You can also code CMDNAME=A, CMDNAME=B or CMDNAME=C. Do not include any blanks before or after the equal sign (=).</p>	<pre> . -CMDName-----A----- . >>-+-----+-----+-----+----->< ' -CMDName-----+A-+- ' +-B-+ '-C-' </pre>
<p>Repeatable Choices: A stack of items followed by an arrow returning to the left means that you can select more than one item or, in some cases, repeat a single item. In this example, you can choose more than one value, with each name delimited with a comma. Do not include any blanks before or after the equal sign (=).</p>	<pre> . ,----- . V >>-CMDName-----+value1-+-+-----+----->< +-value2-+ '-value3-' </pre>
<p>Syntax Fragments: Some diagrams, because of their length, must fragment the syntax. The fragment name appears between vertical bars in the diagram. The expanded fragment appears in the diagram after all other parameters or at the bottom of the diagram. The expanded fragment is identified by a heading with the</p>	<pre> >>- Fragment ----->< Fragment . -A-- . -----+-----+-----+----- +-B--+ '-C--' </pre>

fragment name. Commands appearing directly on the line are required. In this example, the fragment is named "Fragment".	
---	--

1.4 Prerequisite and related information

The following is a list of related publications. For information about ordering these publications, contact your IBM authorized dealer or IBM marketing representative.

- *Using LCCM Functions with Servers and Workstations. SG24-5292-00*
- *LCCM Training and Procedures Guide, available at*
<http://www.pc.ibm.com/us/desktop/lccm/docs.html> (*good URL*)

To learn and understand more about the following Microsoft products, consult your Windows documentation or contact Microsoft:

- Microsoft Windows '95
- Microsoft Windows '98
- Microsoft Windows NT Workstation
- Microsoft Windows NT 4.0 Server
- Microsoft Windows 2000 Professional
- Microsoft Windows 2000 Standard Server
- Microsoft Windows 2000 Advanced Server

1.5 How to send your comments

Your feedback is important in helping to provide the most accurate and highest quality information. If you have any comments about this book or any other System Migration Assistant documentation:

- Visit the <http://www.pc.ibm.com/us/desktop/lccm/esupport.html>. There you will find the feedback page where you can enter and submit comments.
- Send your comments by e-mail to http://www6b.pc.ibm.com:8080/~ums_. Be sure to include the name of the book, the part number of the book, the version of System Migration Assistant, and, if applicable, the specific location of the text you are commenting on (for example, a page number or table number).

Chapter 2. Summary of Changes

Significant differences exist between System Migration Assistant versions 1.0 and 2.1. Users of SMA Version 1.0 should read this document thoroughly before using version 2.1. Also, users of version 2.0 should note the changes below as well.

System Migration Assistant Versions 2.0 and 2.1 represent a complete new code base from Version 1.0.

2.1 System Migration Version 1.0 characteristics

System Migration Assistant Version 1.0 had one executable named SMA.EXE. SMA.EXE made configuration files used to transfer objects and settings to another computer. SMA.EXE also transferred the chosen configuration on the receiving computers. Batch operations took place by SMA.EXE called on the command line. In Version 1.0, removing SMA from Windows was a manual process.

2.2 System Migration Version 2.0 characteristics

System Migration Assistant Version 2.0 has two Windows-based interfaces programs. SOURCE.EXE is a Windows program run on computer to clone, used to make migration configuration files. TARGET.EXE is a Windows program run by the target computer to migrate application software, files, and registry settings to the target. Two command line programs, SRCBAT.exe and TARBAT.exe, now do batch operations.

SMA version 2.0 can be uninstalled from Windows using Control Panel's Add/Remove Programs.

SMA 2.0 extends the functionality of SMA 1.0 in the following areas:

- SMA Version 2.0 expands the capabilities of file selection and copying.
- SMA now can transfer **all** application software, desktop & personality settings, connectivity settings, files and folders to other machine(s).
- SMA users can now choose files by selecting disk drives, folders, or individual files.
- SMA users can now transfer files based on file extension. For example, selecting documents with the extension “.doc” would have all documents of “.doc” on the user's machine transferred to the target computer.

SMA Version 2.0 has the ability to use “*.SMA” files created by SMA 1.0.

2.3 System Migration Version 2.1 characteristics

System Migration Assistant Version 2.1 is similar in structure to 2.0. It installs, uninstalls, and runs in basically the same manner as Version 2.0.

SMA 2.1 extends the functionality of SMA 2.0 in the following areas:

- SMA Version 2.1 expands the flexibility of including and excluding files for copying.
- SMA now can run on Windows 2000 as a Source or Target client.
- SMA now provides a GUI interface for the user to select desired registry keys to migrate.

Chapter 3. What System Migration Assistant can do for you

3.1 Introducing System Migration Assistant

System Migration Assistant (SMA) version 2.1 is a IBM Universal Manageability Life Cycle tool that runs on Microsoft Windows operating systems.

System Migration Assistant copies the look & feel of one computer to another on the network. The look & feel is the user's work environment, or the way the user or company has set up their preferences. Users configure application software the way they want, and when they transfer to a new system, they want their software to be configured the way it was on their old system. Users also spend a significant amount of time configuring their Windows desktop, personality, and network connectivity settings. Your file system, e.g., your company's work project file system, is something that you might want to transfer easily to another computer.

IBM designed System Migration Assistant for system administrators, but is easy enough to use by anyone who has to replicate their computer to another, e.g., persons who wish to transfer their office PC to their notebook.

System Migration Assistant can provide significant savings in time and money for system administrators. Throughout the entire product-life-cycle—from procurement through retirement—IBM has automated many of the labor-intensive tasks associated with PC ownership. IBM's Universal Manageability concepts and technologies, included in System Migration Assistant, virtually eliminate the need to physically configure each individual computer's desktop and working environment when deploying new machines. Companies with hundreds or thousands of PC's to configure can use SMA to reduce cost in time and money in doing this quickly.

With System Migration Assistant, you can set up a standard work environment for your company. You can save time and money by configuring a consistent look and feel so that when users have a problem, you will not have to struggle with individual configurations. With a standard work environment, all application software and Windows settings can have the same personality throughout the company.

The use of System Migration Assistant allows you to define and implement a standard computer desktop and work environment on enterprise and workgroup computers which can yield tangible benefits and helps you:

- Reduce training needed
- Implementing new computers takes less time
- Minimize problem resolution time to keep users up and running
- Help you automate IT processes and reduce your Total Cost of Ownership

System Migration Assistant is valuable when upgrading an old computer to a new system. With companies that have all PC's configured individually without standards, System Migration Assistant can transfer the companies current work environment on their PC's to new computers painlessly. For a company with hundreds of PC's, SMA will save you hundreds or thousands of hours of work.

You can run SMA as a Windows application or automated in batch mode. The biggest savings will come from running SMA in batch mode. This allows you to migrate changes, settings, and customized application software to hundreds of PC's remotely at once.

IBM's intent in making SMA is to solve the most expensive manageability issues that companies face which include:

- Preparing computers for first time use
- Customizing the work environment for the end user
- Assimilate your computers into the rest of the enterprise
- Upgrading to from old to new
- Users being able to recover from disasters

Objects that SMA can transfer are:

- **Application software** to other computers. These are programs such as word processors, spreadsheets, Internet browsers, compilers, etc. You can configure application software to a company standard, then migrate the configured software where needed.
- **Desktop settings** are Active Desktop, Colors, Desktop Icons, Display, Icon font, Pattern, Screen Saver, Wallpaper, and Window Metrics, Start Menu.
- **Personality settings** are Accessibility, Internet Browser, Keyboard, Mouse, Printers, Send To Menu, Shell, Sound, Start Menu, Taskbar, and User Profiles. This allows the systems administrator to clone system Printer Settings and to use this configuration file with multiple systems.
- **Connectivity Settings** are Computer Description, Computer Name, DNS configuration, mapped drives, RAS networking connections, shared folders & drives, TCP/IP configuration, WINS configuration, Workgroup and Domain.
- **Files** SMA can transfer files at the same time that you transfer application software and settings. There is no need to do a separate batch job or use other methods to transfer files. SMA makes it easy to transfer the entire computer system, or the parts you want without having to use another application. You can transfer files by file type, point and choose, or by listing them (batch mode only).
ATTENTION: Application transfers are only supported in mass transfer and by deselecting folders in mass transfer, you run the risk of corrupting their target machine.
- **Windows Registry** settings of your choice can be transferred to other computers. This feature works in batch mode and in GUI mode.

ATTENTION: Registry settings affect the way Windows does things, if you are not careful you can completely disable or destroy things on your system. Your Windows system may no longer work if you alter registry settings. You need to have extreme caution in changing or modifying the registry. Those who have strong expertise in using Windows Registry should only attempt this. Migration of application software will change the registry on the target machine.

3.2 Types of Migrations

SMA has two types of Migrations that you can use. They are mass migration and selective migration.

3.2.1 Mass Migration

1. SMA can replicate applications, all Windows Desktop and Personality settings, Connectivity settings, files, folders and registry to another computer. You can use this method to transfer all application software. This means you will migrate everything from a clone computer to a new computer, with the exception of the operating system.

The benefits of this are that you can configure all your company's application software on one computer. You might want to set up a custom word processor environment for your secretaries throughout the

company. You would have custom templates, tools, standard word processor settings configured, e.g., custom dictionaries settings, print settings, page layouts, and revision system. Then you can transfer this to other workstations. You then have saved time in not having to install the software on each machine, and then manually go to each computer and configure them. This saves you time and money.

Companies with existing PC's can massively migrate their users computer environment to new PC's without having to have all users manually configure their PC's to the way they like it.

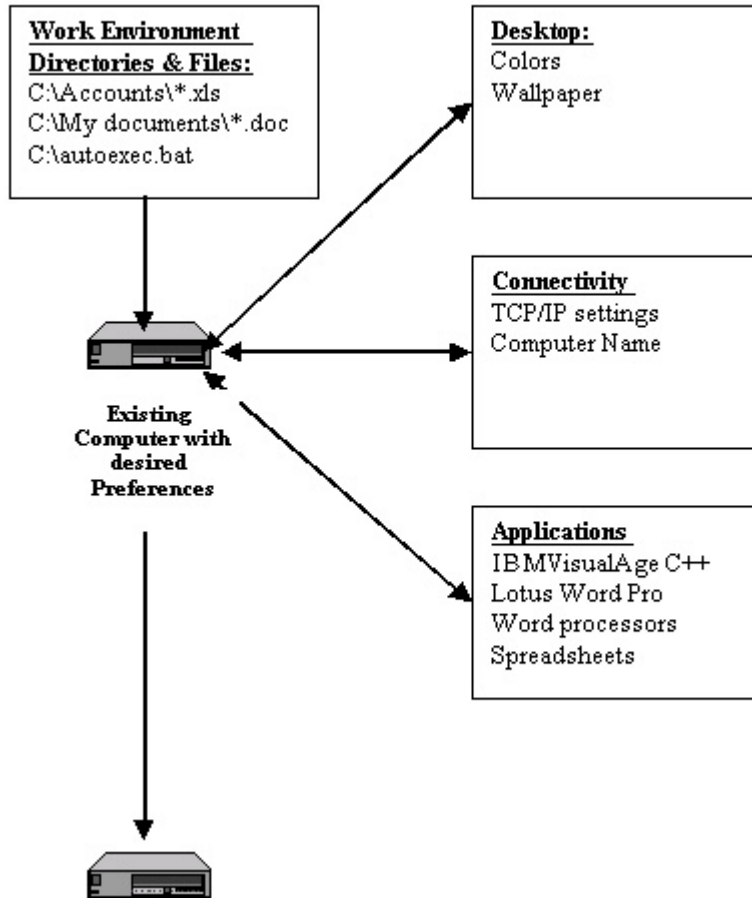


Figure 3-1 Complete Migration of all Applications running under Windows, the Windows Desktop Environment & Settings, etc.

3.2.2 Selective Migration

2. SMA can **selectively** migrate Windows Desktop and Personality settings, Connectivity settings, files & folders, Registry settings (for advanced Registry users) to another computer. You cannot transfer application software with this method.

Uses for this could be installing standard file systems on all computers. This means you would always know where to go to find everything when you assist users. Another example is modifying your current network computers desktop settings, such as distributing new wallpaper throughout the company. You can modify computer network names.

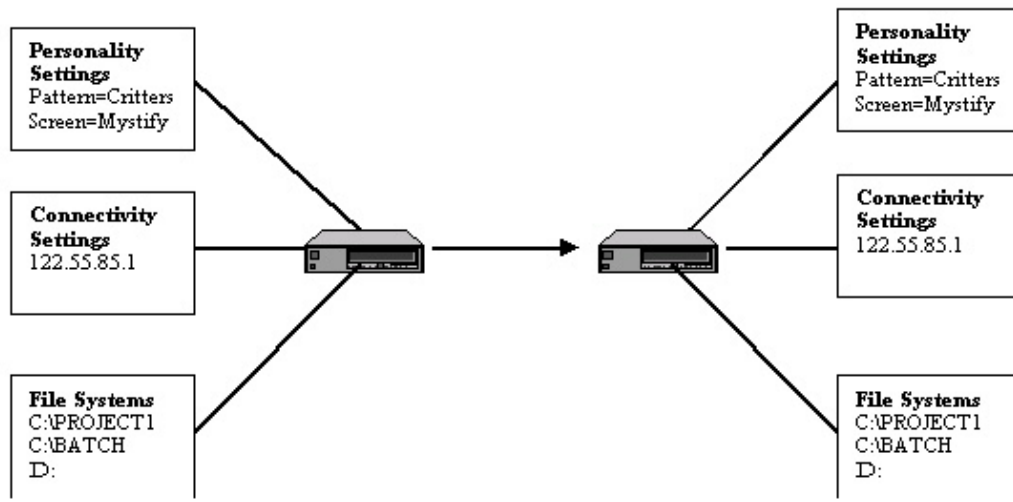


Figure 3-2 Selective migration of Windows desktop personality, connectivity, file & folders

3.3 Migrating Standard work environments

System Migration Assistant (SMA) enables a user or system administrator to migrate the desktop and working environment of one computer to another computer system, a series of supported systems, and in some cases, to another supported Windows operating system.

3.3.1 Singular

You can use SMA to migrate from one computer to another. Transferring your home PC to a new PC is one example. Migrating work environment from your user's desktop computers to laptops or notebooks is a model of singular transfers that occur often.

3.3.2 Network Wide

You can setup a clone computer as a network standard the way you want. Once you configure the clone, you can use SMA to capture the work environment on the clone. Then deploy SMA across the local and wide area networks to migrate the objects you want.

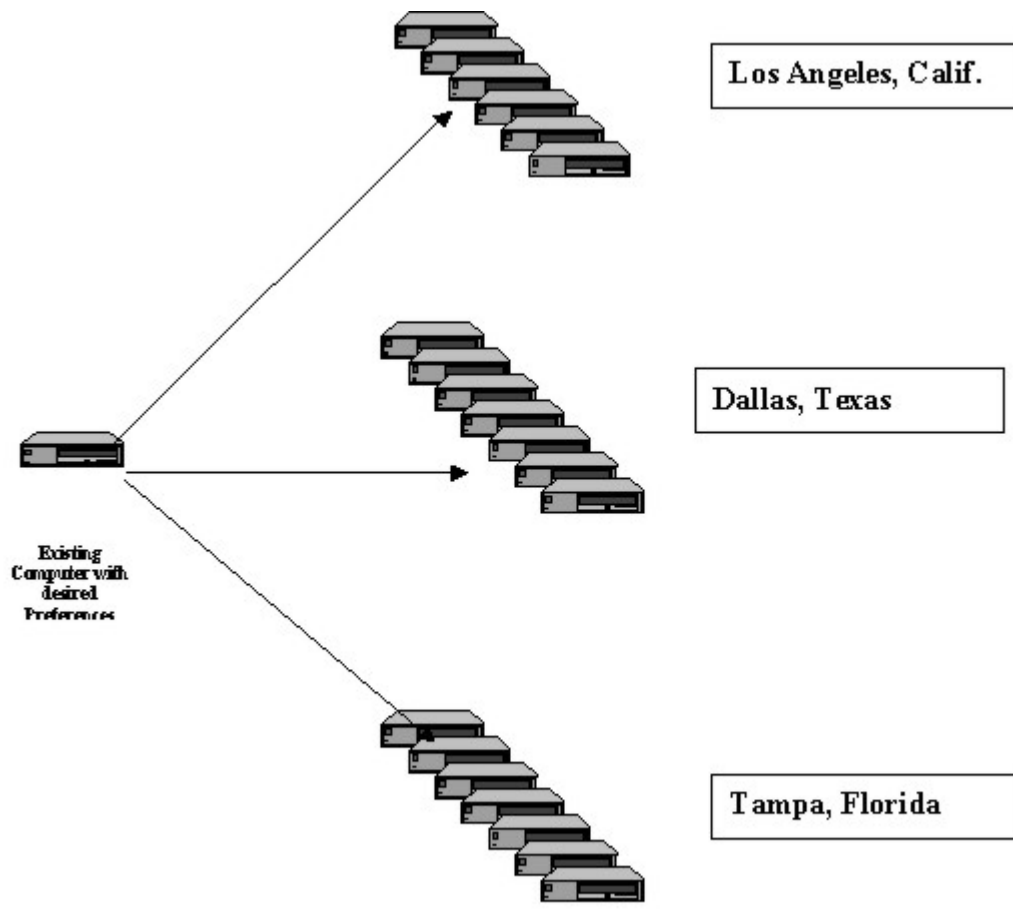


Figure 3-3 Migrate standard work environments through the country.

3.3.3 Enterprise Departmental

You can set up a base clone with settings that all users will receive. You can then transfer these settings to department clones. From there, you can transfer these to different computers.

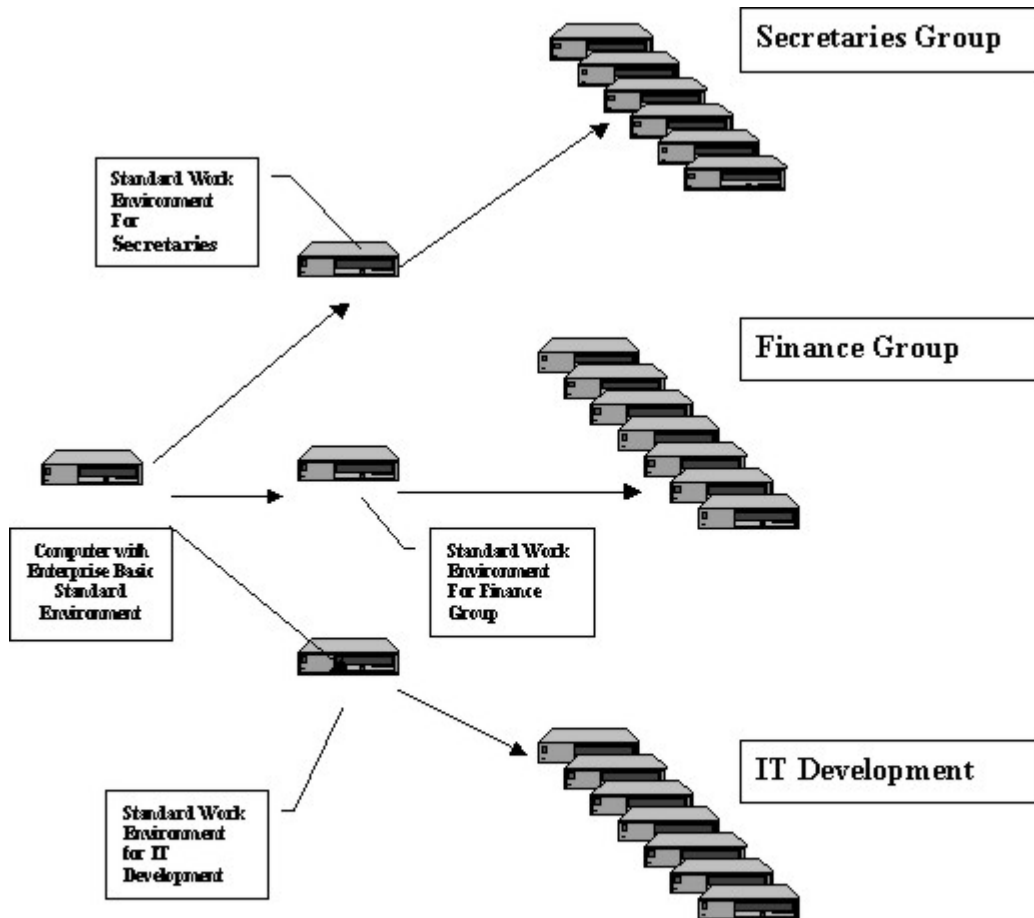


Figure 3-4 Migrate predefined work environment to the enterprise

3.4 Automating SMA with IBM's LCCM

3.4.1 IBM's LCCM

IBM LANClient Control Manager™ (LCCM) is a server-based application that remotely installs operating systems and application software on client systems over the network. LCCM can significantly reduce the time and resources required deploying and re-deploying IBM PCs. LCCM can manage hundreds of client systems from a single server and configure up to 30 simultaneously. As LCCM gains control of a PC before it boots its local operating system, many of the lower-level tasks that normally require a visit to each computer can be done by LCCM across the network.

3.4.2 SMA and LCCM

Using System Migration Assistant, setting up a new PC is faster and less costly than before, often done in just minutes. Combine this program with the network reach of LANClient Control Manager (LCCM), version 2.5, and you can migrate PC settings remotely. This means less administrator time, fewer help desk calls and less inconvenience to the user.

Chapter 4. Objects that you can migrate

SMA can migrate the following:

- Personality settings
- Connectivity settings
- Application software
- Registry Settings
- Files, folders and disk drives

4.1 Personality Settings you can migrate

The following is the list of available Desktop, Personality, and System element groups to set on the computer to copy prior to migration:

Table 1 List of Personality settings that can be migrated

Personality settings	Description
Accessibility	Accessibility settings for keyboard, sound, mouse, and general
Active Desktop	Active state
Colors	Desktop color and window colors
Desktop Icons	Desktop contents: folders (not-empty), shortcuts, icons, and positions
Display	Desktop width, height, and color depth
Icon Font	Title font
Internet Browser	Browser bookmarks and favorites
Keyboard	Keyboard repeat rate, cursor blink rate and delay
Mouse	Left or right handed mouse settings, speed, and double-click time
Pattern	Desktop pattern
Printers	Printer drivers and settings network and local
Screen Saver	Current screen saver settings
Send To Menu	Send To menu settings
Shell	View sort order, view type (larger icon, small icon), show/hide status bar/toolbar
Sound	Sound settings
Start Menu	Start menu commands
Task Bar	Docking edge, size, always-on-top, auto hide, show clock, show small icons in Start menu
User Profiles	Saves the profiles of users not currently logged on when SMA is run
Wallpaper	Desktop wallpaper
Window Metrics	Spacing and arrangement order of minimized windows, message dialog font, menu size, scroll bar sizes

4.2 Personality Settings you cannot migrate

Table 2 List of settings that cannot be transferred.

Personality Setting	Operating System	Setting
Accessibility	Windows 95/98 to Windows NT/2000	ShowSounds SoundSentry Stickykeys
Active Desktop	All	Channels
Color	Windows 95/98 to Windows NT/2000	All
Patterns	Windows 95 to Windows NT/2000	All
Power	All	All
Screen Saver	Windows 95/98 to Windows NT/2000	All

Note: SMA will not transfer **Patterns** and **Wallpaper** between Windows 95/98 Operating Systems and Windows NT/2000. These Operating Systems come with different **Pattern** and **Wallpaper** schemes. For example, Windows 95 has the “Bricks” **Pattern**, but Windows NT does not.

Printer Settings

Printer settings are included in Personality Settings. However, some migrations do not support the inclusion of printer settings. For more information on specifically supported printer settings migration, see “Requirements, supported Operating Systems & Hardware” on page 37.

For the **multiple user** setting to work correctly, you must have administrator privileges.

4.3 Connectivity Settings you can migrate

All network connectivity elements are recorded in the Connectivity Settings. When a SMA migration file is created using selected Connectivity Settings, the network attributes for this particular client are recorded.

The **Connectivity settings** to set on the computer to clone before migration are the following:

Table 3 Connectivity settings that can be migrated

Connectivity setting	Description
Computer Description	Computer description
Computer Name	Network computer name
DNS Configuration	Domain Name Server search order, domain suffix search order, Host Domain
Domain/Workgroup	Domain or Workgroup name
Mapped Drives	Mapped drives
RAS Networking Connections	Remote Access Services configuration phone book entries for Dial-up networking
Shared Folders and Drives	Shared folders and drives
TCPIP Configuration	IP address, subnet mask, and default gateway
WINS Configuration	Windows Internet Name Service configuration

Note: While client systems can share migrated Personality Settings, not all Connectivity Settings can be shared. Be sure to use Connectivity Settings for one-to-one migration only. For example, two systems cannot share the same network name on the same network.

The following connectivity settings must be unique:

- Network Computer name
- TCP/IP address

Plan to give the target machine a unique computer name and/or TCP/IP address before or after migration. If you are going to discard the source computer, e.g., you had an old PC and were going to retire it, you would use selective migration, **computer name** setting. If you were going to add it to your network and keep the original PC, it would be better to change the name with **TARBAT**. The computer name can be changed either through **TARGET.EXE** or **TARBAT** by using the editable settings.

TARBAT can change the network computer name and TCP/IP address on the target computer. You do this by writing a command in a **TARBAT** command file.

4.4 Application software

SMA can transfer application software such as Lotus Notes, Lotus 123, word processors, internet browsers and more the way you configured them. Note that SMA will transfer all application software on your computer to another. You cannot select individual software packages to transfer. You must use the Mass Migration method to transfer application software.

NOTE: Don't use the selective migration method of SMA to copy application software. Use the mass migration method to copy application software for you.

4.5 Registry Settings

You can select Registry settings to transfer. Use of this is for advanced users only. You can do this by using the **SRCBAT** batch program, or by using the **SETTINGS.TXT** file with **SOURCE**.

4.6 Files

SMA can transfer files and folders for you. You can copy entire disks if you wish to the target computer.

NOTE: Directory "create" timestamps **are not** transferred.

Chapter 5. Understanding how SMA works

SMA takes a snapshot of your computer and Windows environment. SMA then uses the snapshot as blueprint to duplicate your environment on target computers.

The snapshot is the profile of your computer. SMA writes the profile to a specified location. The computer you take a snapshot of is called the **source** computer. The computer you migrate the snapshot to is the **target** computer.

5.1 SMA includes the following programs:

- SOURCE.EXE – A Windows program that produces a profile file of desktop & software settings, files, application software, and/or registry settings to transfer to another computer.
- SRCBAT.EXE – A program used in batch mode that produces a profile file of objects to transfer.
- TARBAT.EXE – A program used in batch mode to copy objects based on the profile made on the source computer.
- TARGET.EXE – A Windows program that copies objects from a profile made by SOURCE on the originating computer.
- SMASETUP.EXE – Is the installation program.

Both Windows and batch applications are compatible with each other. You can interchange the batch mode and GUI mode versions.

5.2 System Migration Assistant migrates the custom-working environment of one computer to another in two phases.

- The first phase creates a list of instructions to SMA on how-to-migrate, and copies the settings, files, and applications to migrate to the source computers PROFILE directory. You can use SOURCE, which is a Windows application to do this phase. To do batch, you must use SRCBAT.
- The second phase copies the objects and configures the target computer's operating system. Use TARGET to accomplish this task in Windows. You use TARBAT if you want to automate this process in batch mode.

The creation of migration profile files allows for increased productivity and tangible money savings. By automating the SMA process on many computers through software deployment and batch scheduling software such as IBM LCCM or by batch/script routines you can save time and money.

The source and target computers can be the same computers (used as backup/restore). Either time or space (distance) can separate the source and target machines. The settings from one source machine can be applied to many target machines.

5.3 The types of migrations you can do

There are two types of migrations.

5.3.1 Mass Migration

Mass Migration will copy **all** software applications and registry settings from one computer to another. It will also replicate **all** Desktop & Personality Settings and Connectivity Settings to the target computer. You can copy all the files on your hard drives, or you can select which drives, folders, and/or files you wish to copy.

Mass Migration instructions for Windows-based interactive program is located in Chapter 9 on page 95. Instructions for the batch program is in Chapter 10, page 113.

5.3.2 Selective Migration

Selective Migration allows you to choose what migration objects to replicate on the target system. You can choose to migrate Desktop & Personality settings, Connectivity settings, and/or files to copy.

Instructions on accomplishing Selective Migration are in Chapter 9.4, “Using SMA Windows-based application for Selective capture profile” on page 62.

NOTE:

Selective Migration **does not** allow you to migrate application software. To migrate application software, you must choose the Mass Migration method of migration instead of Selective Migration. Mass Migration will replicate **all** application software on the system to clone. There is no way to selectively choose which applications to migrate. The user can deselect applications in mass transfer but this could lead to problems on the target side (in fact it probably will).

Migrating application software both copies the application’s files and registers the application into the operating system, e.g., the Windows Registry.

Copying application software by itself without assimilating it into Windows may cause the applications to malfunction or not work at all.

5.4 You can use SMA with Interactive or automated sessions

SMA can generate a list of objects to migrate interactively or non-interactively.

5.4.1 Interactive

To have System Migration Assistant interactively prompt you to generate the custom objects you wish to copy to another computer, use the SOURCE program. The SOURCE program is a Windows program.

Instructions for using SOURCE are on page 62.

5.4.2 Non-interactive

To use System Migration Assistant as part of a batch process, use SRCBAT. Instructions for using SRCBAT are on page 113.

Chapter 6. Requirements, Supported Operating Systems & Hardware

This chapter provides important information and tasks to perform prior to installing or using System Migration Assistant.

6.1 Requirements

For best results when you use System Migration Assistant, logon as *administrator* or a user with administrative privileges. SMA requires that you have *administrator* privileges to access the Windows Registry data.

The following features cannot be set or retrieved if SMA is running without administrator rights (NT/2000 only):

- Computer Name
- Computer Description
- DNS Configuration
- Shared Folders & drives
- TCP/IP configuration
- WINS configuration
- Workgroup/Domain
- NTFS file permissions

However, it is possible to implement the migration in two steps.

1. An administrator sets global system-wide settings.
2. The end user then sets desktop & personality settings.

Minimum Computer Requirements:

- Pentium-based system with
- 4 megabytes of RAM
- 5 megabytes of free hard drive space (40 for mass) – this doesn't count the space for the output files themselves, which can range from a few K to several hundred megabytes.
- A supported Windows Operating system
- There must be adequate drive space for temp variables.

Migration of Settings to (Target):

- Any supported IBM PC system with
- A supported Windows Operating System

The following are the requirements for using SMA Version 2.1:

- **Source Computer:**

It is requisite that the source computer has a supported Operating System installed on it. The SMA executable must run in a session with Administrative privileges if NTFS security attributes

are to be captured (NT only). There must be adequate drive space for temporary variables (32 megabytes).

- **Target Computer:**

The target computer **must** have a supported operating system installed on it before migration. You cannot install an operating system using SMA. You can, however, use LCCM to install a operating system on computers.

The target computer must have adequate disk space for the data to be migrated.

The target computer must have disk share rights and network access to Source Computer files and SMA configuration files across the network.

The target computer must have an operating system supported by SMA installed on it prior to using SMA.

On Mass Migrations, target and source computers must be running the same Operating System. The target computer OS must be at an equal or higher OS revision level relative to the source computer.

6.2 Supported Operating Systems

IBM System Migration Assistant requires one of the following Microsoft operating systems to run on:

Table 4 Settings Migration Table

From - To	Windows 95	Windows 98	Windows NT 4.0 Workstation	Windows NT 4.0 Server	Windows 2000 Professional	Windows 2000 Server
Windows 95	A, B	A	A	A	A	A
Windows 98		A, B	A	A	A	A
Windows NT 4.0 Workstation			A, B	A	A	A
Windows NT 4.0 Server				A, B	A	A
Windows 2000 Professional					A, B	A
Windows 2000 Server						A, B

Group A Transfer: Selective migration including Personality, Connectivity, & Data Files

Group B Transfer: Mass migration including Application software, Registry settings, as well as Group A settings

Those migrating from OS/2 to Microsoft Windows will be able to replicate some IBM OS/2 settings. Use IBM PerSys on the OS/2 computer to create a configuration file. System Migration Assistant can then apply the relevant settings to a target computer.

Restrictions

For migration between different operating systems, selected files and applicable settings will be migrated.

Transfer of application software can only be done on the same operating system. The operating system must be at the same release level or higher. Transfer of application software cannot be done between different operating systems, or to a lower revision of the same OS.

Note that there are differences between Windows operating systems. For example, the selection of wallpaper available is different between Windows 98 and Windows NT. Therefore, these cannot be transferred.

6.3 Supported Hardware

By default, SMA 2.1 is designed to migrate to IBM hardware. Thus, the TARGET versions of SMA may not run on non-IBM hardware.

Supported IBM Hardware Systems

The IBM System Migration Assistant can transfer Windows desktop settings from any Pentium based PC to selected IBM systems, including PC, IntelliStation, ThinkPad and Netfinity servers. PC, IntelliStation, and ThinkPad can be migrated interchangeably while servers can only migrate to other servers.

A complete and up-to-date list of selected IBM systems is at the System Migration Assistant Website:
<http://www.pc.ibm.com/us/software/sysmgmt/products/sma/index.html>

Chapter 7. Installing SMA

This chapter deals with the manual Windows installation of System Migration Assistant.

7.1 Overview

System Migration Assistant provides a Windows-based installation program to guide you through the installation process.

NOTE: To reinstall IBM System Migration Assistant, make sure you have removed SMA from your system. Then start the installation process again (See Chapter 8, “Removing SMA from Windows” on page 55).

7.2 Concepts

System Migration Assistant, Version 2.1 installation program is an Install Shield® executable.

This installation program will install both source and target computer program in the SMA folder, as well as provide for removal of SMA from Windows. The default SMA folder is C:\PROGRAM FILES\IBM\SMA.

SMA must be installed on both the clone computer you wish to capture migration objects from, and target computer(s) to which you will copy the objects.

Automating SMA deployment and installation is possible by using IBM LANClient Control Manager™ (LCCM). For details on this, see the Chapter 16, “Automating SMA further using LCCM”, on page 179

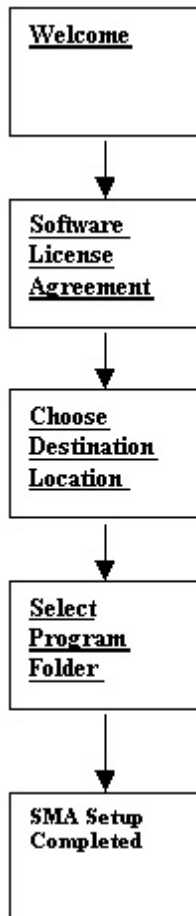


Figure 7-1 Process flow of the installation program

7.3 Requisites

- You must install System Migration Assistant on both the source computer and the target computer(s).
- You must install SMA with administrator rights.

7.3.1 SMA Folder Locations

Determine where the SMA installation program should be located. For example, C:\SMA. SMA defaults to C:\PROGRAM FILES\IBM\SMA.

NOTE: The installation program is not in the SMA program when installation finishes.

7.3.2 Obtain System Migration Assistant Version 2.1 Software

You can download/install System Migration Assistant Version 2.1 at <http://www.pc.ibm.com/us/software/sysmgmt/products/sma/index.html> on the World Wide Web to download System Migration Assistant.

NOTE: SMASETUP is a program that installs SMA. There are six language versions of SMA, and the installation programs for each are as follows:

SMASETUP_DE.EXE	German
SMASETUP_EN.EXE	English
SMASETUP_ES.EXE	Spanish
SMASETUP_FR.EXE	French
SMASETUP_JA.EXE	Japanese
SMASETUP_ZHCN.EXE	Chinese

The following are the instructions to download System Migration Assistant.

1. Click [“Click here for download and support”](#)
2. Click **“*Yes, I agree to these terms”**
3. Type in your E-mail address *
4. Click **“Please do not use the information collected here for future marketing or promotional contacts or other communications beyond the scope of this transaction”**, if you don’t want IBM to use the information.
5. Click **Submit** button.
6. You have two choices, to begin the actual installation, or to download SMASETUP to your computer.

A. Click **“Run this program from it’s current location”**

NOTE: This choice will begin the actual installation of System Migration Assistant to your computer at this time.

B. You will be prompted **“Do you want to install and run “SMASETUP.EXE from gtp.pc.ibm.com”?”**. Click **Yes**.

Or,

A. Click **“Save this program to disk”**.

B. At **File name:** type in the filename and path for SMASETUP.

From the folder into which you downloaded the System Migration Assistant program, run the SMASETUP program to install System Migration Assistant.

7.4 Planning SMA Installation

Before you install IBM System Migration Assistant, read the README.TXT file shipped with SMA.

The README file contains product information, late-breaking installation news, tips, and a link to IBM sites where you can find the latest information and versions of the product.

The README files is provided in flat text format. You can use your favorite editor to view the README.TXT file.

When you install IBM System Migration Assistant, the installation program places shortcuts into a folder in the Windows **Start** menu, and entries for the SMA Source and Target components you installed. The Window's Start Menu suite folder name is IBM SMA.

7.5 Reinstalling SMA

To reinstall IBM System Migration Assistant, make sure you have removed SMA from your system. Then start the installation process again (See Chapter 8, "Removing SMA from Windows" on page 55).

7.6 SMA Installation Program

7.6.1 Starting the installation program

SMASETUP is program that installs System Migration Assistant.

ATTENTION: Only run one SMASETUP program at a time. Do not run multiple instances of SMASETUP. If you run more than one copy, you may **corrupt** your computer system.

Install SMA through Window's **Add/Remove Programs** process.

1. Make sure there are no other SMASETUP programs running.
2. At Windows taskbar, click **Start → Settings → Control Panel**.
3. Double-click **Add/Remove Programs**
4. Click **Install/Uninstall** tab.
5. Click **Install** button.
6. Click **Next**.
7. Type path location of the SMASETUP program at **Command line for installation program:**
Example: C:\TEMP\SMASETUP.
8. Click **OK**.



Figure 7-2 System Migration Assistant (SMA) icon as seen from Windows Add/Remove Programs.

When you start the installation program, follow the instructions in the installation windows that display on your computer screen. You will have the opportunity to review all entries before the installation begins.

When you complete the information on requested on a window, click **Next** to proceed to the next window.

If you want to review or change any information you entered, click **Back** to return to the previous window.

7.7 System Migration Assistant Setup Welcome screen

The IBM System Migration Assistant Setup program **Welcome** screen displays.

The installation program automatically verifies which operating system is installed.

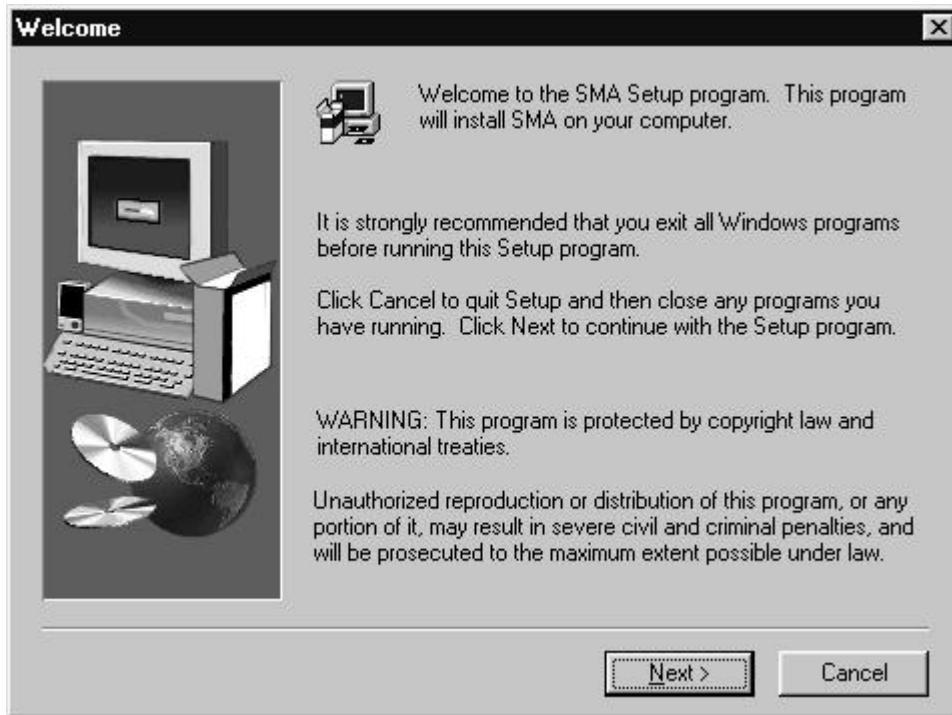


Figure 7-3 SMA setup program Welcome Screen

You should read the copyright notices, information, and the reminder to close all Windows programs.

Instructions:

1. Read **instructions** on screen.
2. Click **Next**.

The installation program automatically verifies which operating system is installed on the source computer.

7.7.1 Software License Agreement.

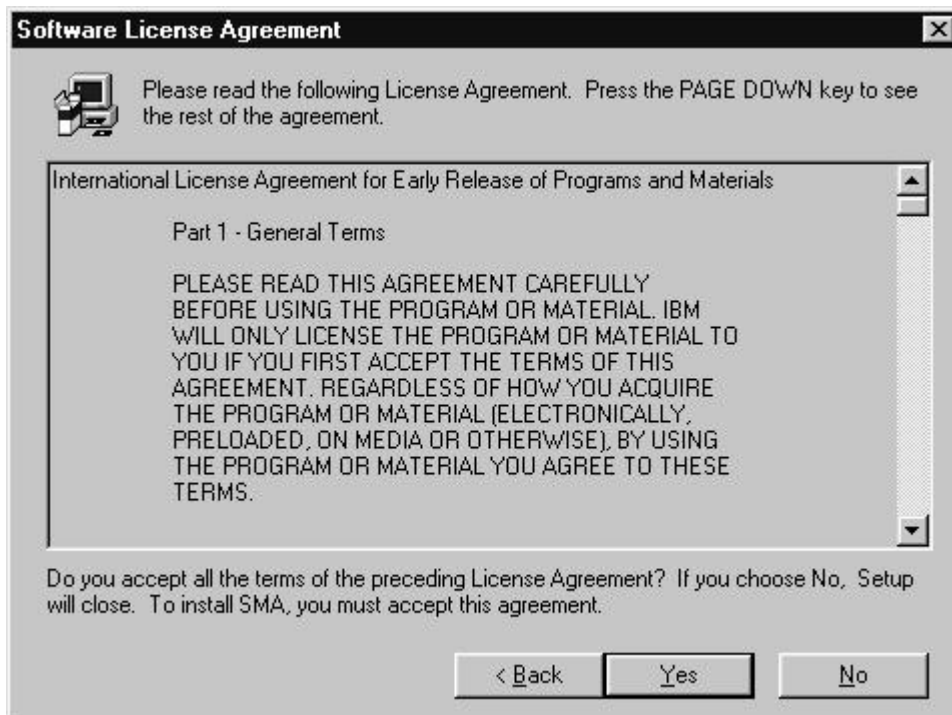


Figure 7-4 Review IBM's software license agreement.

On the **Software License Agreement** window, read the license terms and conditions.

Scroll down to see all the terms and conditions.

If you agree, click **Yes** to accept the license terms and conditions.

If you do not agree to the license terms and conditions, click **No**. The installation program ends.

This screen allows you to choose the location for System Migration Assistant programs & files. SMA Setup displays the default folder for the SMA programs and files at **Destination Folder**.

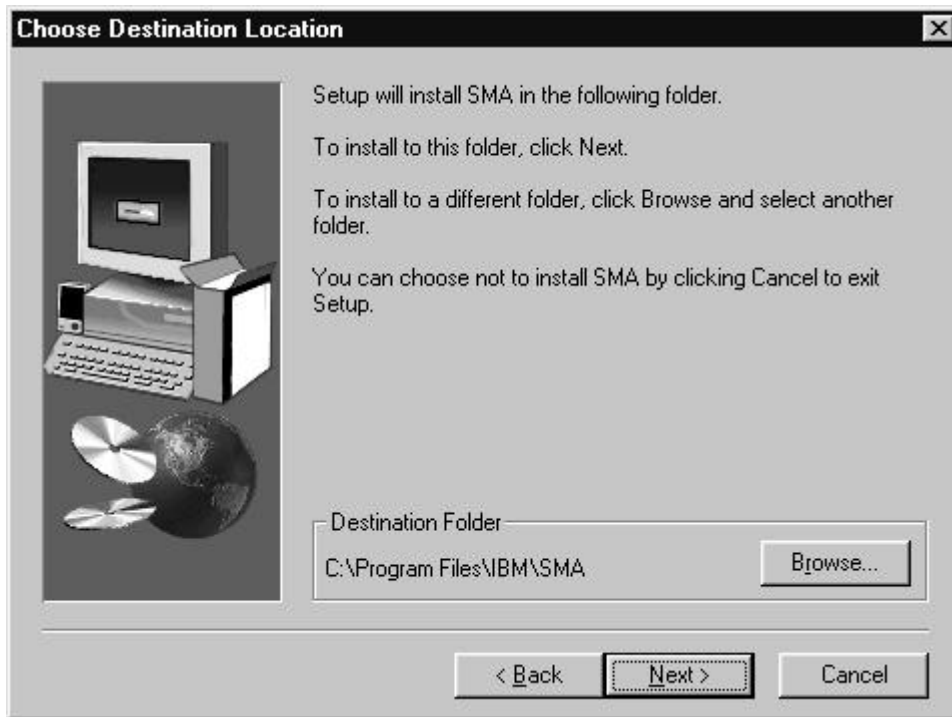


Figure 7-5 Review and choose folder location for SMA files.

If you select a drive that has insufficient space, the installation program prompts you to select a different drive. If no drive on the system has sufficient space, you are notified and the program ends.

- To accept the default folder, click **Next**. You will then go to the next screen.
- To select your own file path, click **Browse**. You will see the **Choose Folder** screen.

The window **Choose Folder** displays the default SMA pathname at **Path:**



Figure 7-6 Choose SMA destination folder location.

Click the **Drives** button if you wish to select a different drive.

There are three methods to provide the SMA pathname.

- Type in the pathname of your choice at **Path:**, then click **OK**. You will then see the next installation screen.
- Select the pathname in the **Directories:** tree, then click **OK**. You will then see the next installation screen.
- Click **Network** to look for the drive that is on the network. You will see the following screen:

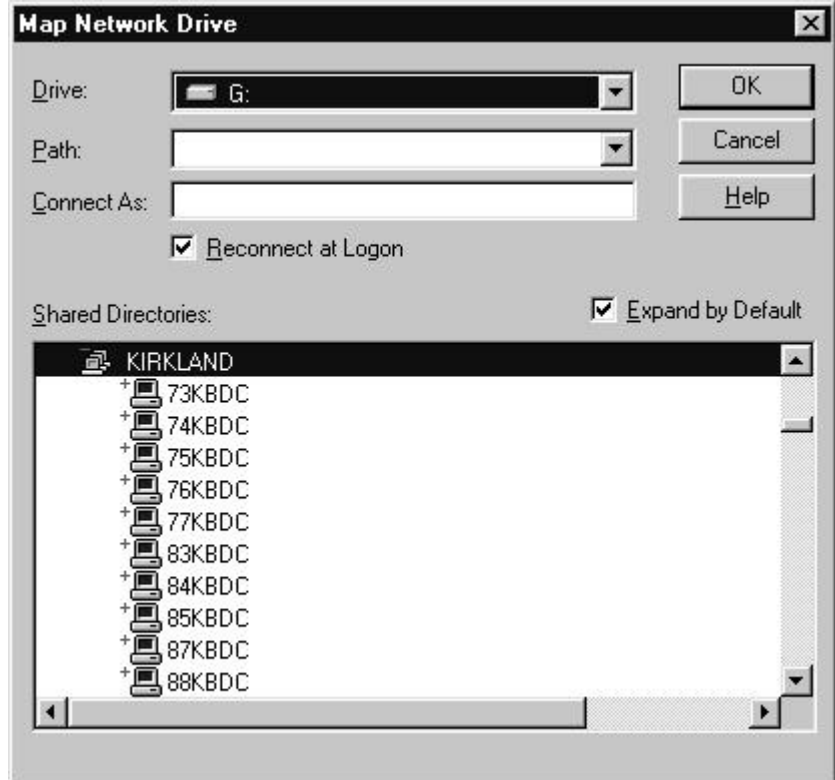


Figure 7-7 Choose network folder location for SMA.

You can give SMA the path by either:

- Type the pathname in **Path:** and click **OK**. You will then progress to the next installation screen.
- Select the path in the **Shared Directories:** tree.

7.7.2 Select name for SMA Program folder in Window's Start menu.

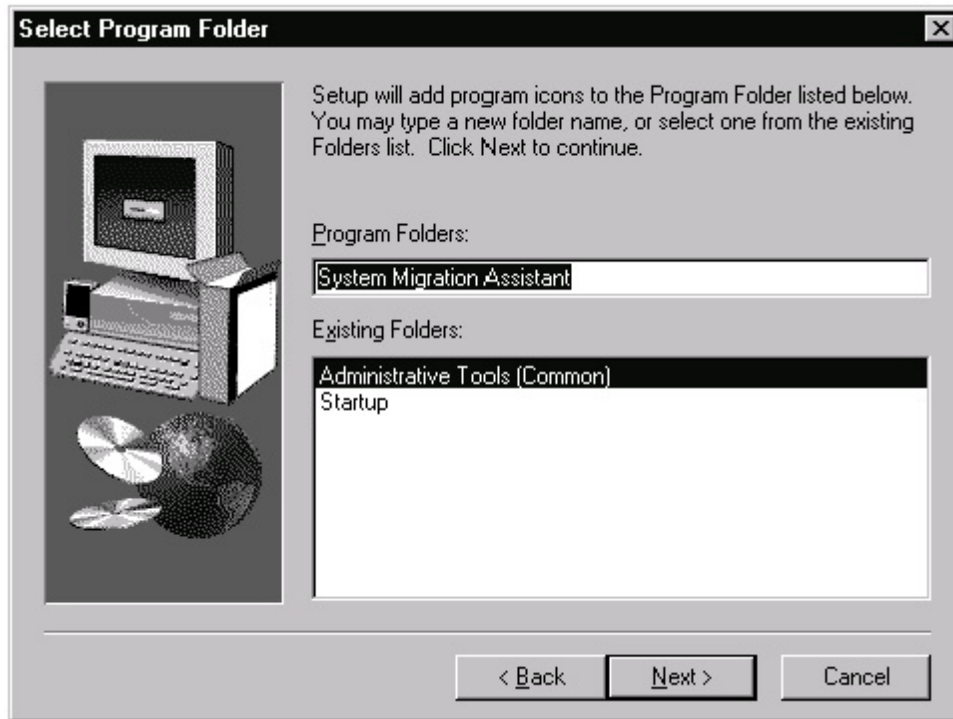


Figure 7-8 Add SMA to Window's Program Folder .

The installation program will put SMA in Windows Start menu. The **Program Folder** is where to start the Windows based SMA applications. SMA's default name is displayed at **Program Folders:**. The **Existing Folders** list box displays program folders already in Window's Start menu.

The default **Program Folder** name is IBM SMA.

- To accept the default **Program Folder** name click **Next**.
- To change, at **Program Folders:** type new folder name at **Program Folders:**, click **Next**.
- To place SMA in a existing folder, select a folder in **Existing Folders:**, then click **Next**.

Once you clicked **Next**, the screen disappears. SMA Setup then begins installing System Migration Assistant. While SMA is being installed, you will see graphs showing progress of the installation.

7.7.3 Installation Finished



Figure 7-9 SMA installation completed.

SMASETUP displays the results of the installation.

Click **Finish** to exit the installation.

7.7.4 Review that SMA Installation was Successful

The installation program placed all programs in the SMA folder you specified. The default folder for SMA programs & files is C:\PROGRAM FILES\IBM\SMA. The installation program created the following sub-folders:

- Profiles
- Support

The SMA folder will contain the following:

```
Folder of C:\PROGRAM FILES\IBM\SMA

10/24/99 12:16p      <DIR>      .
10/24/99 12:16p      <DIR>      ..
10/24/99 12:16p      <DIR>      PROFILES
10/24/99 12:16p      <DIR>      SUPPORT
10/08/99 10:43A           24 CLNTMP.BAT
04/14/99 09:03A          53,760 ZLIB.DLL
10/04/99 01:57P          24,576 CHECKVER.EXE
09/25/99 11:26P          332,808 COM32UPD.EXE
10/22/99 04:52P          1,458,176 SOURCE.EXE
10/22/99 04:52P          40,960 SRCBAT.EXE
10/22/99 04:36P          24,576 TARBAT.EXE
10/22/99 04:37P          385,024 TARGET.EXE
10/24/99 12:17P           5,674 UNINST.ISU
08/02/99 05:11P          13,637 LICENSE.TXT
10/20/99 12:54P           4,794 SRCCOMMANDS.TXT
10/19/99 04:59P           3,121 TARCOMMANDS.TXT
```

The subfolder SMA\PROFILES contains the following files.
(none)

The subfolder SMA\SUPPORT contains the following files:

```
Folder of C:\PROGRAM FILES\IBM\SMA\SUPPORT

10/24/99 12:16p      <DIR>      .
10/24/99 12:16p      <DIR>      ..
10/22/99 03:37P           6,526 SETTINGS.TXT
```

NOTE: During the SMA migration, a temporary file with an extension of .lck is created. If you cancel out of the program, it may remain in the SMA folder. You can delete it.

Chapter 8. Removing SMA from Windows

You can remove System Migration Assistant from Windows.

To remove SMA from your system, do the following:

1. At the Windows taskbar, click **Start→Settings→Control Panel**.
2. Double-click **Add/Remove Programs**
3. Click **Install/Uninstall** tab.
4. In the list box **The following software can be automatically removed by Windows ...**, select **IBM System Migration Assistant 2.1**.
5. Click **Add/Remove**.
6. Click **Yes**, on the Confirm File Deletion Window
7. Click **OK**, on the Finish Screen.

NOTE: To reinstall IBM System Migration Assistant, make sure you have removed SMA from your system. Then start the installation process again (See Chapter 7, “Installing SMA” on page 41).

Chapter 9. Using SMA to capture computer profile to migrate

9.1 Overview

System Migration Assistant migrates the custom-working environment of one computer to another in two phases.

- The first phase creates a list of instructions to SMA on how-to-migrate, and copies the settings, files, and applications to migrate.
- The second phase copies the objects and configures the target computer’s operating system.

The creation of migration profile files allows for increased productivity and tangible money savings by automating the SMA process on many computers through software deployment and batch scheduling software such as IBM LCCM or by batch/script routines.

This chapter deals with the first phase – the process of creating a list of settings, files and applications to clone. To learn about the second phase, go to Chapter 10, “Migrating your computer profile to other computers”, on page 117.

This chapter illustrates the steps necessary in having SMA create migration profile files. System Migration Assistant creates migration profile files that record objects to migrate and migration instructions. The migration profile files are the basis of any SMA migration. The profile is the instruction guide for SMA with which to replicate the work environment of the source computer to another.

9.2 Concepts

9.2.1 Interactive or automated sessions

SMA can generate a profile to migrate interactively or non-interactively.

9.2.1.1 Interactive

To have System Migration Assistant interactively prompt you to generate the custom objects you wish to copy to another computer, use the SOURCE program. The SOURCE program is a Windows program.

Instructions for using SOURCE for selective migrations, see page number 62, to use SOURCE for mass migrations, see page number 95.

9.2.1.2 Non-interactive

To automate System Migration Assistant, use SRCBAT. Instructions for using SRCBAT are in this chapter, see page number 113.

9.2.2 Registry Keys

Many of the settings that customize a computer and its applications are stored in the registry. SMA migrates and applies these sections of the registry to the target computer.

During a Mass Transfer of System Migration Assistant, the following registry keys are copied:

```
HKEY_LOCAL_MACHINE\SOFTWARE  
HKEY_LOCAL_MACHINE\SYSTEM  
HKEY_CURRENT_USER
```

SMA will exclude several subkeys under the above if they are hardware related.

During a Selective Transfer of System Migration Assistant, the user has the ability to select within the following registry keys:

```
HKEY_LOCAL_MACHINE\SOFTWARE  
HKEY_CURRENT_USER
```

9.2.3 Type of Migration

9.2.3.1 Mass Migration

Mass Migration will copy **all** software applications from one computer to another. It will also replicate **all** Desktop & Personality Settings and Connectivity Settings to the target computer. You can copy all the files on your hard drives, or you can select which drives, folders, and/or files you wish to copy.

Mass Migration instructions for Windows-based interactive program are located in this Chapter, on page 95. Instructions for the batch program is in this Chapter, on page 113.

9.2.3.2 Selective Migration

Selective Migration allows you to choose what migration objects to replicate on the target system. You can choose to migrate Desktop & Personality settings, Connectivity settings, and/or files to duplicate.

Instructions on accomplishing Selective Migration are in this chapter on page 62.

NOTE:

Selective Migration **does not**, by design, allow you to migrate application software. To migrate application software, you must choose the Mass Migration method of migration instead of Selective Migration. Mass Migration will replicate **all** application software on the system to clone.

Migrating application software may be achieved by selecting all the necessary files (Install directory and Shared DLLs, etc.) and registry entries needed for the application to run. This can be difficult and requires an advanced user.

Copying application software by itself without assimilating it into Windows may cause the applications to malfunction or not work at all.

9.3 Planning to capture a profile to migrate

9.3.1 Application Software Settings

Set all application software to desired configuration prior to Mass Migration.

9.3.2 Windows Personality Settings

Prior to migration, review and set all Windows Desktop & Personality, and Connectivity settings the way you desire them.

9.3.2.1 Personality Settings

The following is the list of available Desktop, Personality, and System element groups to set on the computer to clone prior to migration:

Personality settings	Description
Accessibility	Accessibility settings for keyboard, sound, mouse, and general
Active Desktop	Active state
Colors	Desktop color and window colors
Desktop Icons	Desktop contents: folders (not-empty), shortcuts, icons, and positions
Display	Desktop width, height, and color depth
Icon Font	Icon size, spacing, and title font
Internet Browser	Browser bookmarks and favorites
Keyboard	Keyboard repeat rate and delay
Mouse	Left or right handed mouse settings, speed, and double-click time
Pattern	Desktop pattern
Printers	Printer drivers and settings network and local
Screen Saver	Current screen saver settings
Send To Menu	Send To menu settings
Shell	View sort order, view type (larger icon, small icon), show/hide status bar/toolbar
Sound	Sound settings
Start Menu	Start menu commands
Task Bar	Docking edge, size, always-on-top, auto hide, show clock, show small icons in Start menu
User Profiles	Saves the profiles of users not currently logged on when SMA is run
Wallpaper	Desktop wallpaper
Window Metrics	Spacing and arrangement order of minimized windows, message dialog font, menu size, scroll bar sizes

Note: The following groups have settings that will not transfer:

Accessibility - “Use Stickykeys”, “Use SoundSentry” and “Use ShowSounds”.

Note: SMA will not transfer **Color** and **Patterns** between Windows 9x Operating Systems and Windows NT. Windows 9x and Windows NT come with different **Color** and **Pattern** schemes. For example, Windows 9x have the “Bricks” **Pattern**, but Windows NT does not have this **Pattern** standard.

9.3.2.2 Connectivity Settings

The **Connectivity settings** to set on the computer to clone before migration are the following:

Connectivity Setting	Description
Computer Description	Computer description
Computer Name	Network computer name
DNS Configuration	Domain Name Server search order, domain suffix search order, Host Domain
Domain/Workgroup	Domain or Workgroup name
Mapped Drives	Mapped drives
RAS Networking Connections	Remote Access Services configuration phone book entries for Dial-up networking
Shared Folders and Drives	Shared folders and drives
TCPIP Configuration	IP address, subnet mask, and default gateway
WINS Configuration	Windows Internet Name Service configuration

NOTE:

The computer name must be unique on the network.

The local machine’s TCP/IP address must be unique on the network.

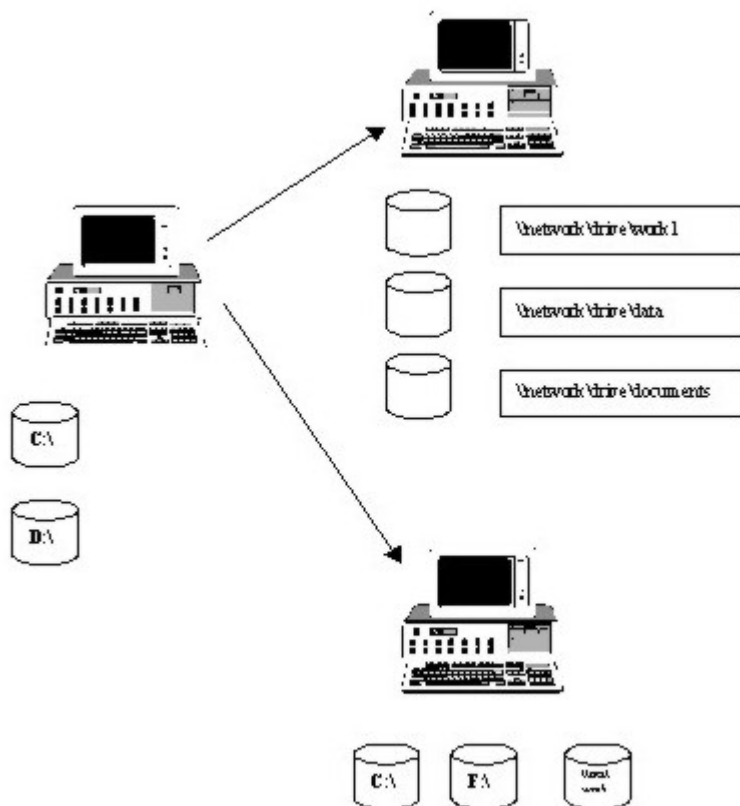
Plan to give the target machine a unique computer name and/or TCP/IP address before or after migration.

SMA target computer batch program TARBAT can provide ability to change network computer name and network address on target computer through use of command file.

9.3.3 Drive, Folder, and file considerations

Potential File Problems

Does your source computer have the same disk drive layout as the target you intend to transfer to? If not, you may have to plan an alternate destination for files and folders.



Bat, Cmd, INI and LNK files – Mass migration

Copying files to a target computer with a different drive designator may be a cause of problems.

Files that have file pathnames hard-coded in them, such as batch files (.bat, .cmd, *.exe, etc.) may malfunction when exported to another computer. This is also true for configuration files (.ini, .cfg, .lnk, etc.).

For example, current files on drive **c:** may be moved to drive **g:** on the target. Another example is moving files from drive **f:** to another computer (**c:**, **d:**) where there is no drive **f:**.

Disk Space

Make sure the target computer have enough disk space available for the migration.

Do not migrate Windows Operating System files from source to target computer

You **must** have the Windows operating system installed on the target system **before** using System Migration Assistant.

To automate installation of Operating Systems onto notepads, computers, and servers, use LCCM. To learn more about IBM LCCM, see Chapter 16, “Automating SMA further using IBM’s LCCM” on page 179.

9.4 Using SMA SOURCE application for Selective & Mass migrations

9.4.1 Overview

System Migration Assistant can interactively work with you to generate the list of user preferences and applications you wish to replicate on another computer.

There are two types of migrations: Selective & Mass.

This section informs you how to do a selective migration. The selective migration allows you to select Desktop & Personality or Connectivity elements to migrate. You can select registry keys for migration. You can choose which drives, folders, or files to migrate. You can even migrate files by their file extensions.

Note: The Selective Migration **will not** transfer application software, for example, your word processor, spreadsheet, browser, etc. If you want to transfer application software, go to the section on mass migration on page 95 in this chapter.

System Migration Assistant performs the actual migration in two phases.

In the first phase, SMA captures the objects to migrate and writes the profile to file.

This chapter deals with the first phase. You must use SMA to capture the work environment of a computer to clone. This process creates migration profile files that needed for input to the second phase.

SMA must run on the computer from which settings and files are being copied for the first phase of the migration. The SMA program must run on the target machine for the second phase of the migration.

In the second phase, SMA on the target computer reads the settings and files being migrated from the migration profile files and from an optional command file. SMA then locates the objects and migrates them to the target computer. For information on how to accomplish the second phase, refer to Chapter 10, "Migrating your computer profile to other computers", on page 117.

The migration profile provides the second phase on the target computer a list of objects and settings to migrate. The command file provides additional instructions for SMA to perform.

System Migration Assistant can generate the list of user preferences and applications to copy to another computer when the user is not at the work site, for example, late at night.

9.4.2 Concepts

The Windows SMA program you will use is named SOURCE. SOURCE is a program that makes a profile of migration objects to transfer to the target computers.

SOURCE works with you interactively to make the list of migration objects. It also wants the location of where to put the profile.

When you finish making the list, SOURCE processes the profile. SOURCE obtains data settings from Windows OS and Registry, then outputs the list of migration objects and migration command & data instructions to files.

Once this is accomplished, you must either run on the target computer the Windows-based TARGET, or batch mode TARBAT. These will copy applications, files, and settings to the target computer and register them.

The Windows-based interactive process is as follows:

SOURCE Program
(UI Screens)

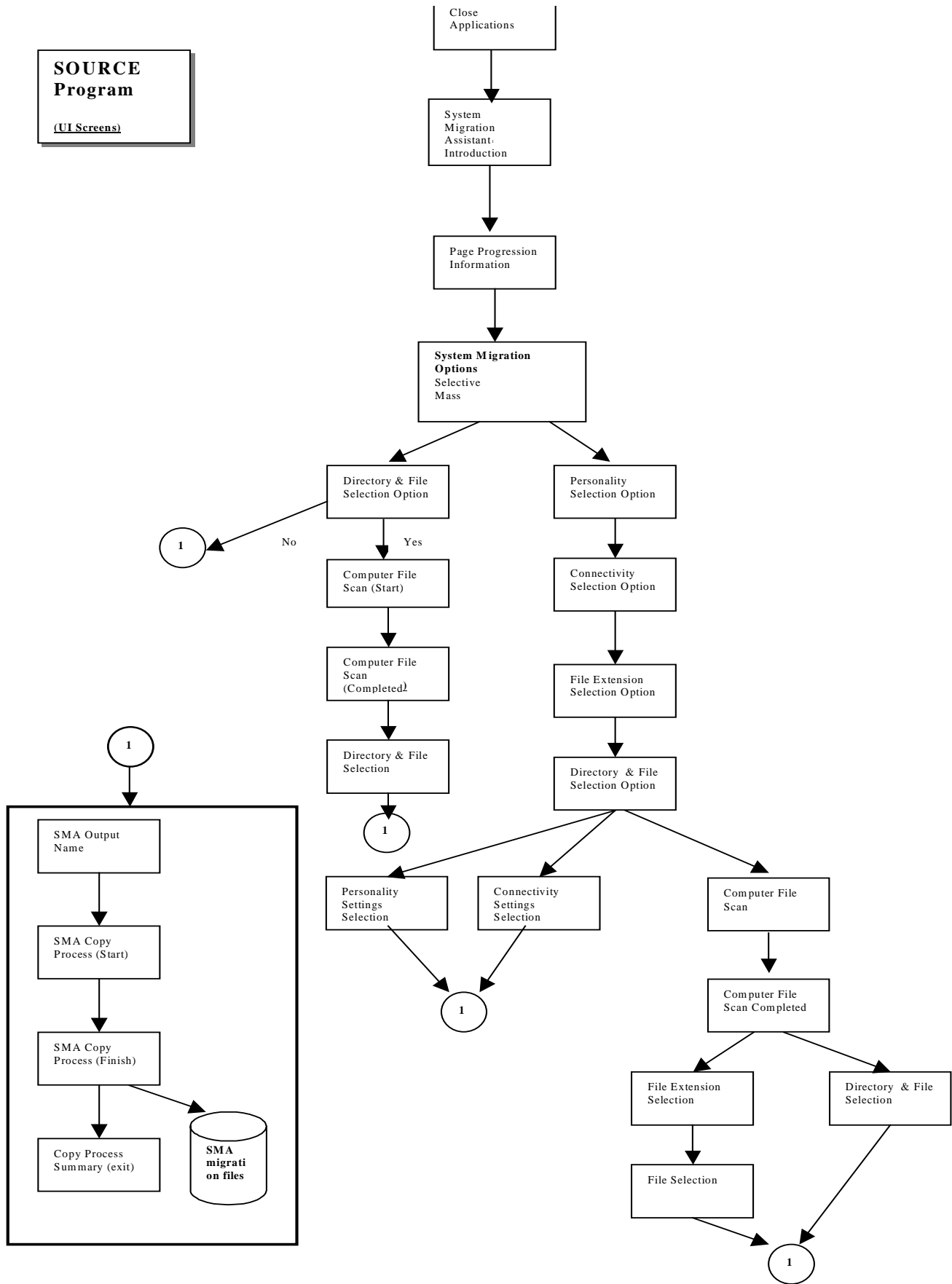


Figure 9-1 Windows-based SMA process flow

9.4.3 Requisite information prior to making a migration profile

Before you begin, you must have done the following:

- Installed SMA on the source computer.
- You have *Administrator Privileges* on the client system.

You must set all Desktop & Personality and Connectivity Settings through Control Panel prior to migration.

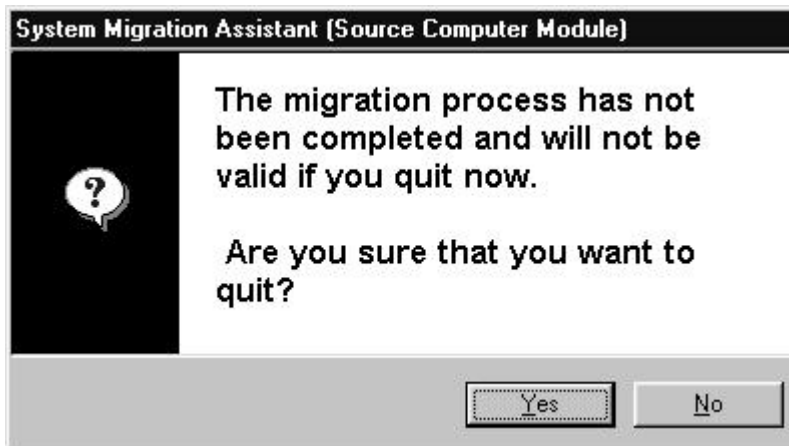
This is the best time to put in company standard wallpaper, screen savers, company standard word processing templates in place, forms, etc.

9.4.4 Using SOURCE to do a Selective migration

9.4.4.1 Selective - Canceling Out of the Program

You can stop the migration process at any time.

1. Click **Cancel** button on any screen. SMA informs you that the program will end. SMA prompts to confirm you wish to terminate the program.



2. Click **Yes**.

SMA will remove any output files created, and will return you to the Windows.

9.4.4.2 Selective - Starting SOURCE to do Selective migration

You can start SOURCE from the Windows taskbar menu.

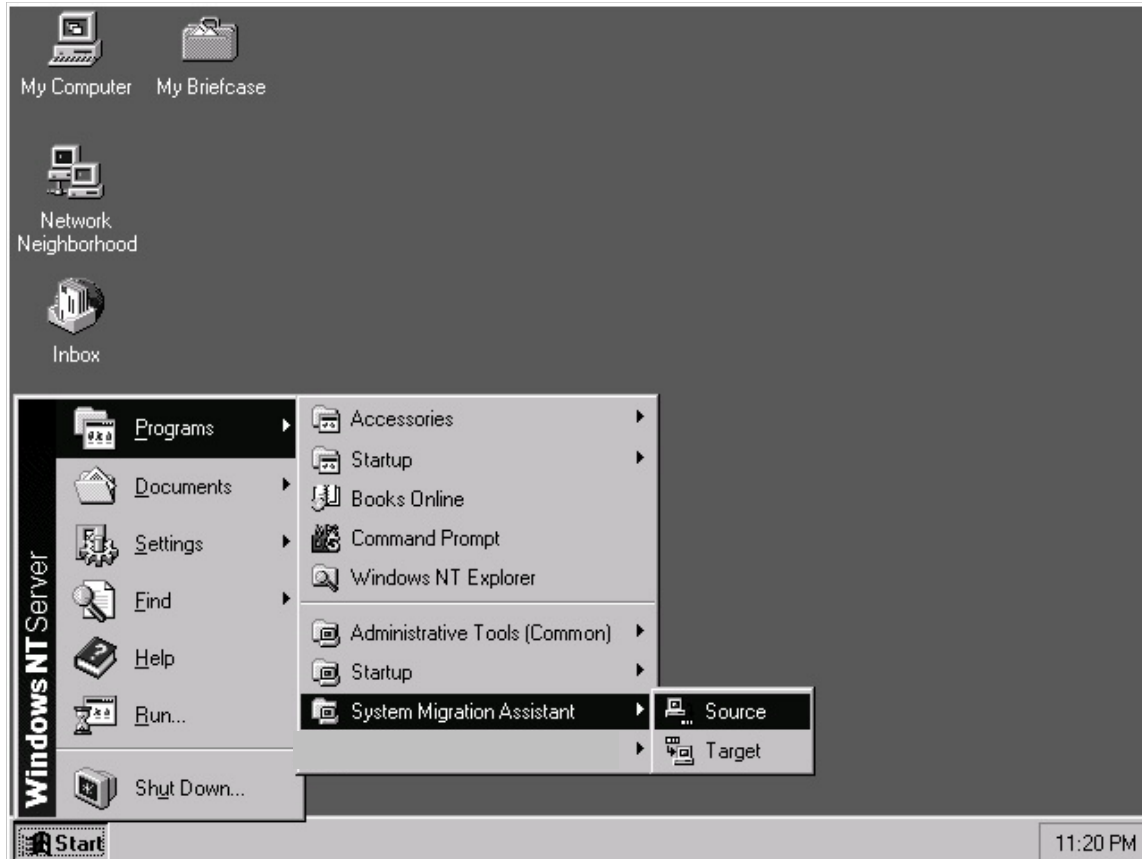


Figure 9-2 Starting SMA from Windows taskbar.

Click Windows taskbar **Start** → **Programs**→**System Migration Assistant**→**SOURCE**.

Windows starts System Migration Assistant.

9.4.4.3 Selective - Close other applications before running SMA

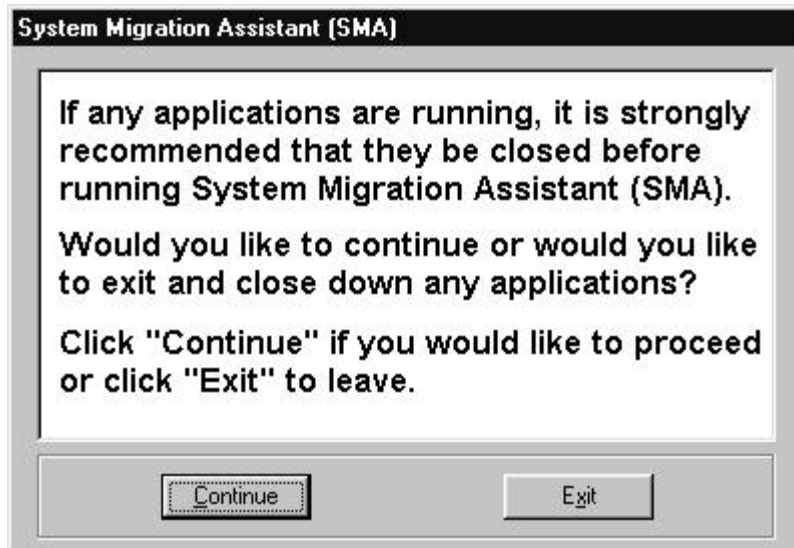


Figure 9-3 Close all applications before running SMA

System Migration will work best if no other applications are running at the same time. Close your applications. Close your applications. Either exit or close them before you click **Continue**.

Example:

1. Close any applications
2. Click **Continue**

9.4.4.4 Selective - Introduction Screen

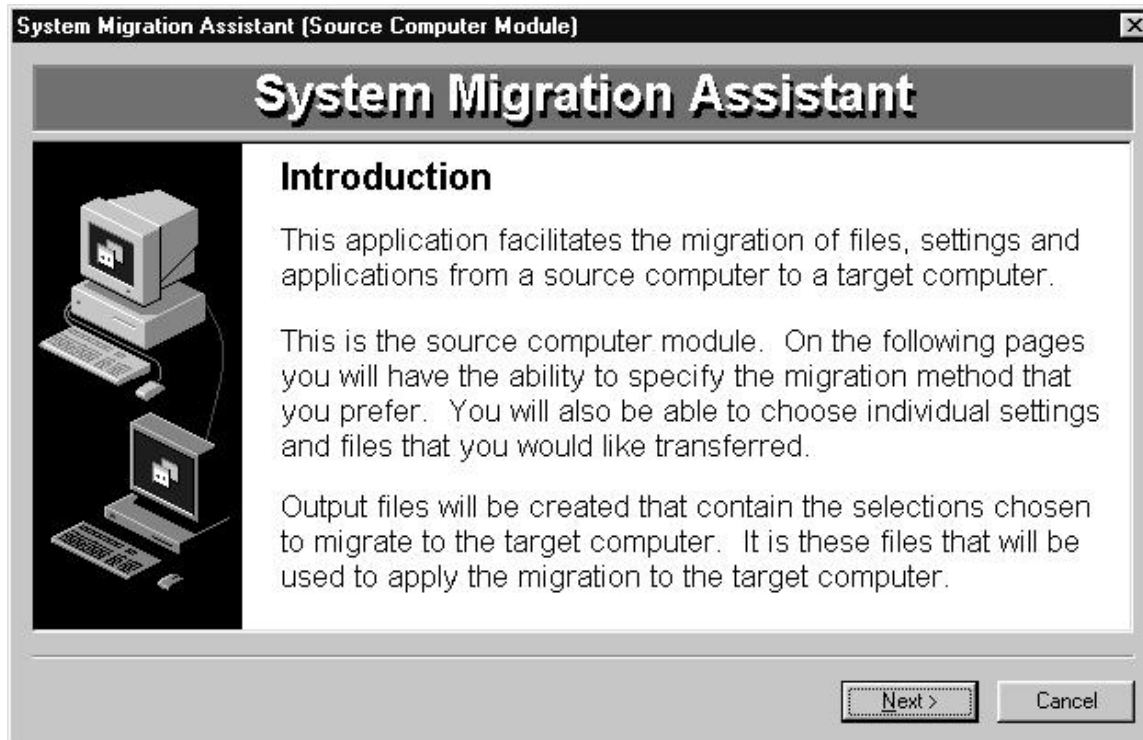


Figure 9-4 System Migration Assistant Introduction Screen

This is the SOURCE introduction screen. Read the information.

Click **Next** to continue to the next screen.

9.4.4.5 Selective - Page progression screen

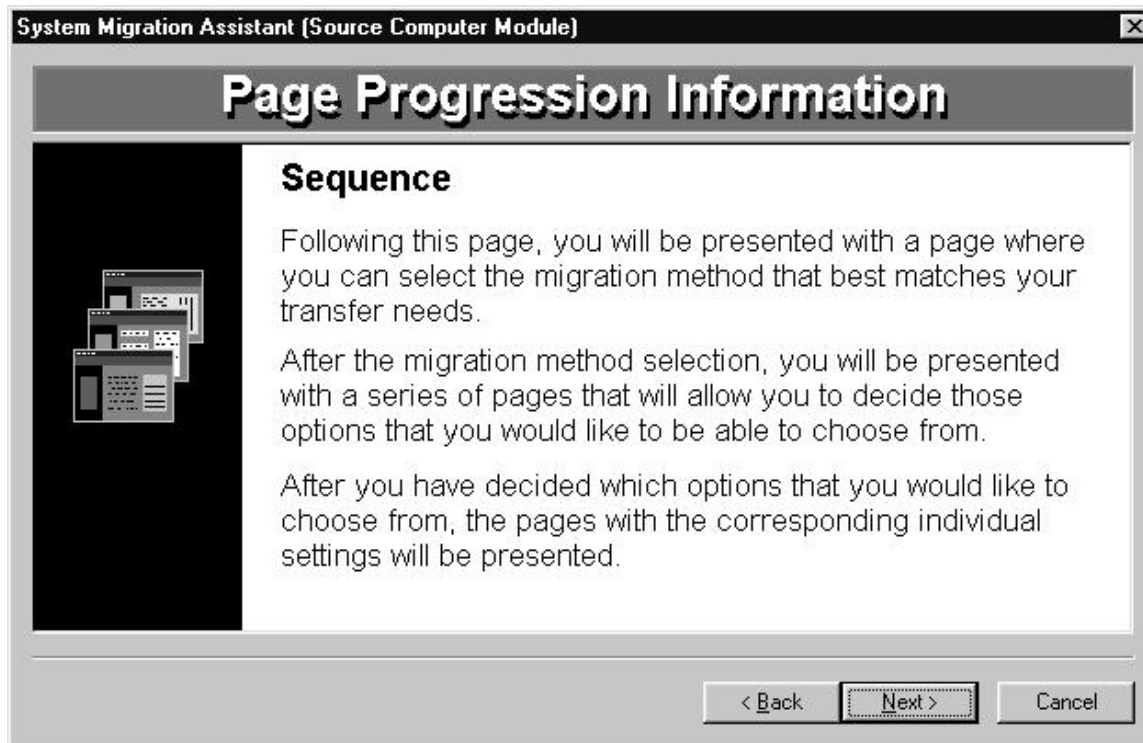


Figure 9-5 Information Screen on Selecting Migration Type

Click **Next** to progress to the next screen.

9.4.4.6 Selective - Select Migration Method

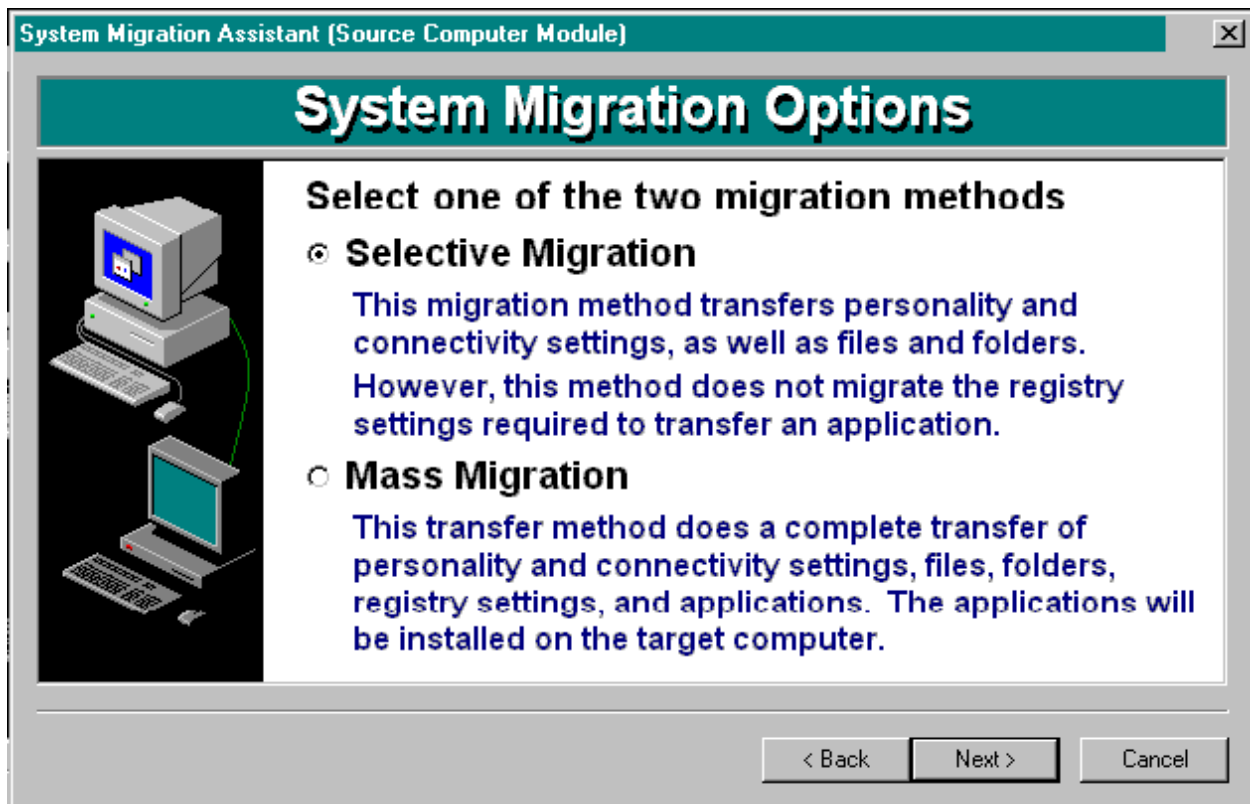


Figure 9-6 Select Migration Type

Choose between doing a selective or a mass migration.

- A selective migration allows you to choose which objects you wish to migrate. You can choose to migrate Desktop & Personality elements, Connectivity elements or Folders & Files. You cannot migrate application software, such as spreadsheets, word processors, etc.
- Mass migration replicates all application software, desktop & personality settings, connectivity settings, files & folders. The target computer will be the same as the source computer.

To do a selective migration

1. Click **Selective Migration**
2. Click **Next** to continue to the next screen

9.4.4.7 Selective - Option to select Personality settings

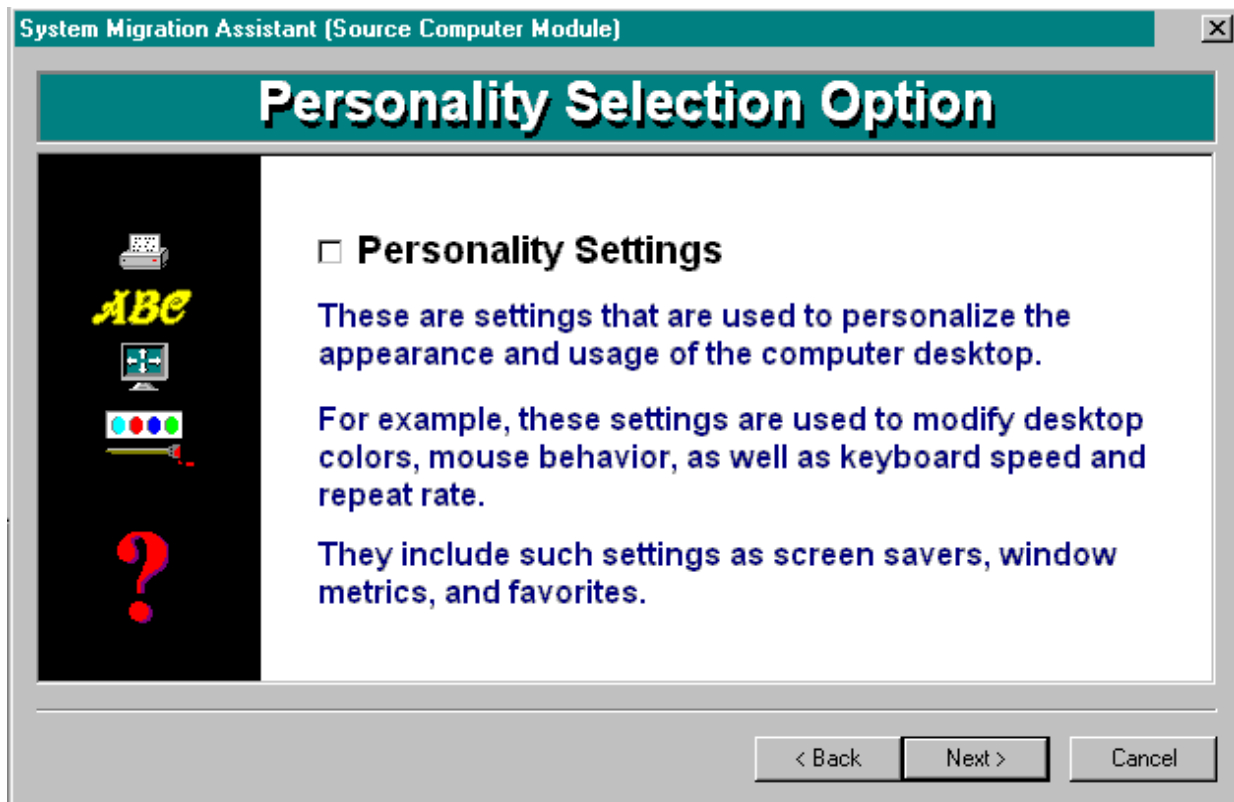


Figure 9-7 Option to select to migrate Windows Desktop & Personality Settings

This option allows you to migrate **Personality Settings**. These are desktop settings, system settings, printer settings, and other settings that personalize your Windows environment.

To select Personality settings that you want to migrate

1. Click **Personality Settings** checkbox if you wish to migrate them.
2. Click **Next**.

You will later be given screens that allow you to select the Personality settings you wish to migrate.

9.4.4.8 Selective - Select to Migrate Connectivity Option

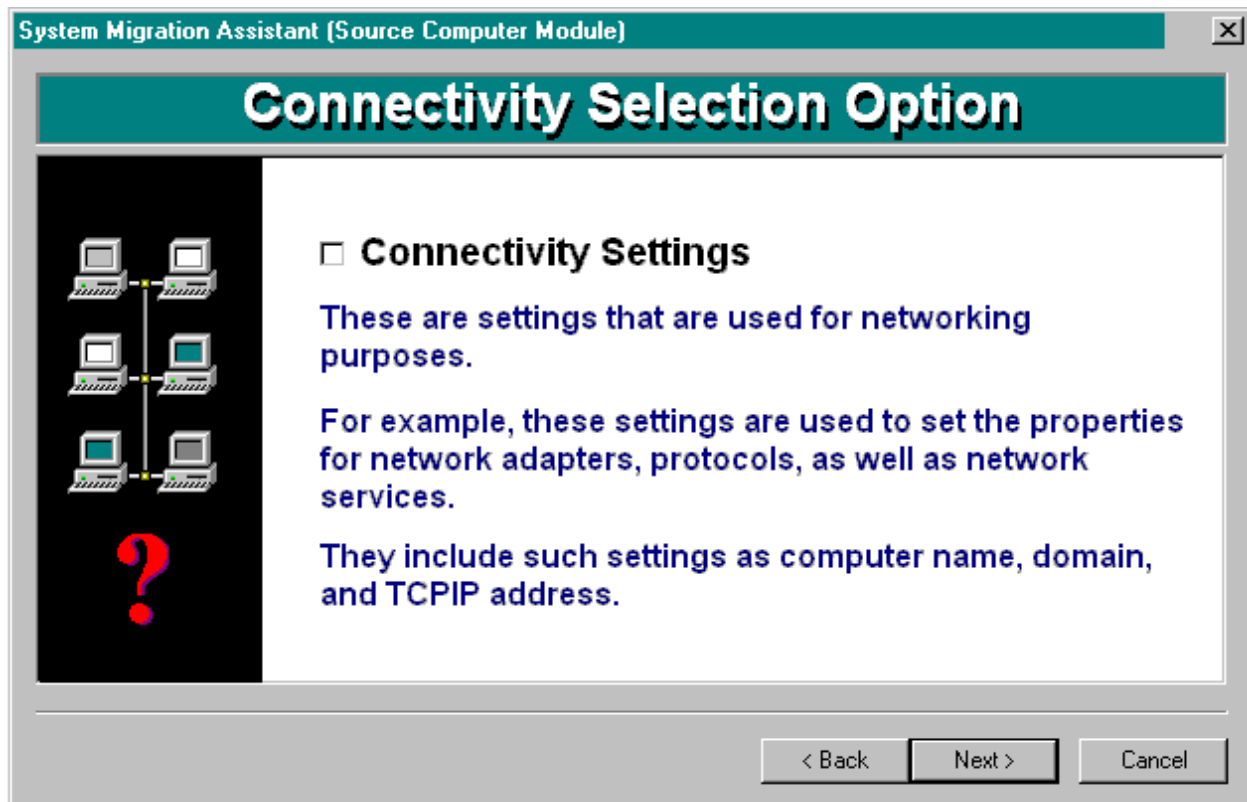


Figure 9-8 Option to migrate Connectivity Settings

This option allows you to migrate **Connectivity Settings**. These objects relate to how your network or RAS settings are configured.

To be able to select the connectivity objects to migrate

1. Click **Connectivity Settings** checkbox if you wish to migrate them.
2. Click **Next**.

Later, you will be given screens that allow you to select the Connectivity settings you wish to migrate.

9.4.4.9 Selective - Select to Migrate File Extensions

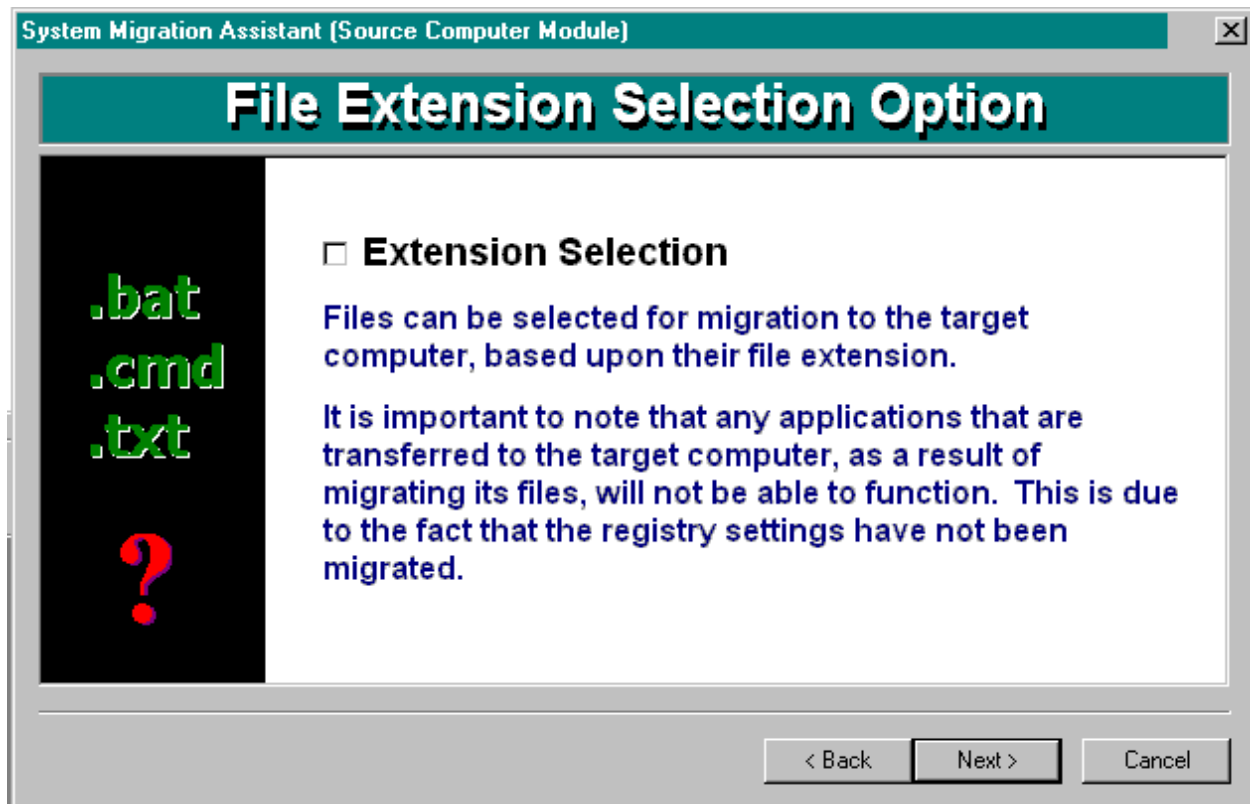


Figure 9-9 Option to migrate files based on file extensions

This option allows you to select files to migrate by their file extension. All files by that extension, for example, *.doc, will be copied to the target computer.

To be able to select and copy files to the target computer by their file extension

1. Click **Extension Selection** checkbox if you wish to migrate files by this method.
2. Click **Next**.

9.4.4.10 Selective - Select to Migrate Files & Folders Option

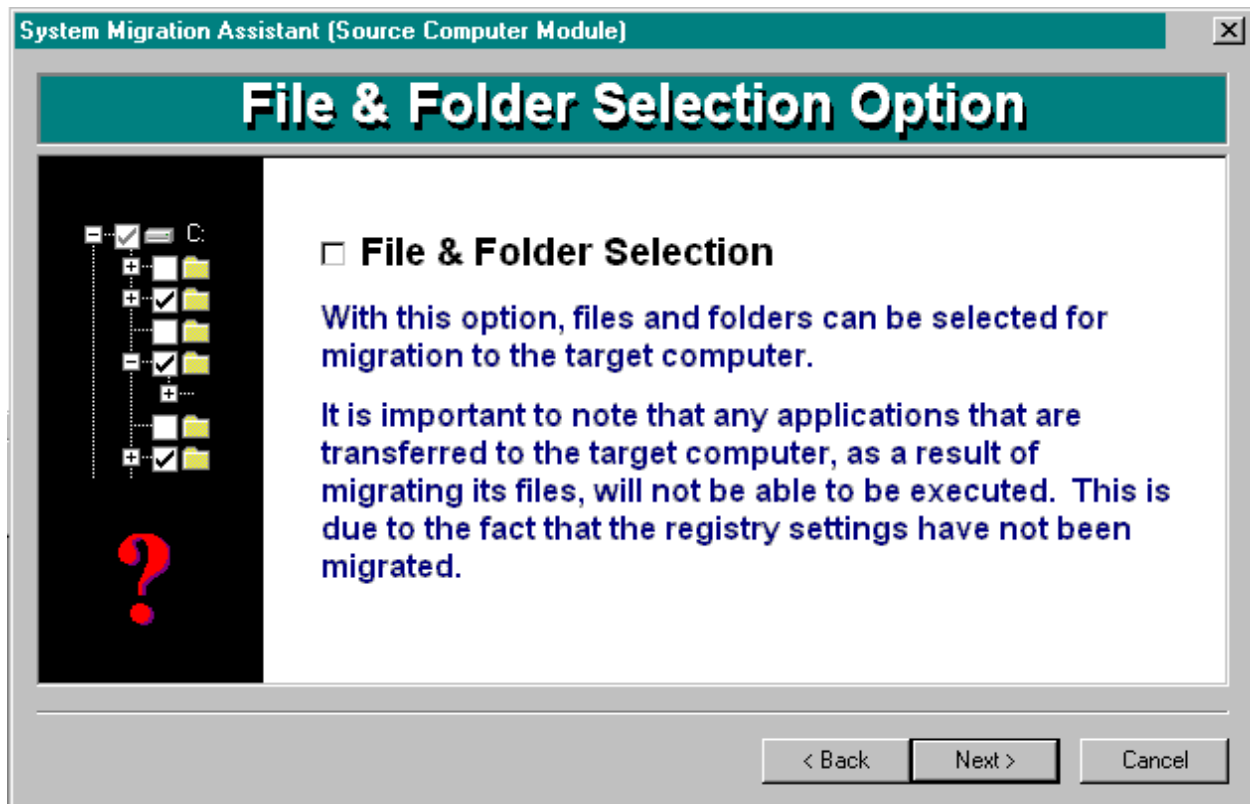


Figure 9-10 Option to select individual drives, folders, and/or files to migrate.

This option to enables you to select disk drives, folders, and files to migrate to the target computer.

To be able to select your choice of files, folders, and/or drives to migrate

1. Select **File & Folder Selection** checkbox if you wish to migrate files by this method.
2. Click **Next**.

9.4.4.11 Selective - Set Personality Elements to Migrate

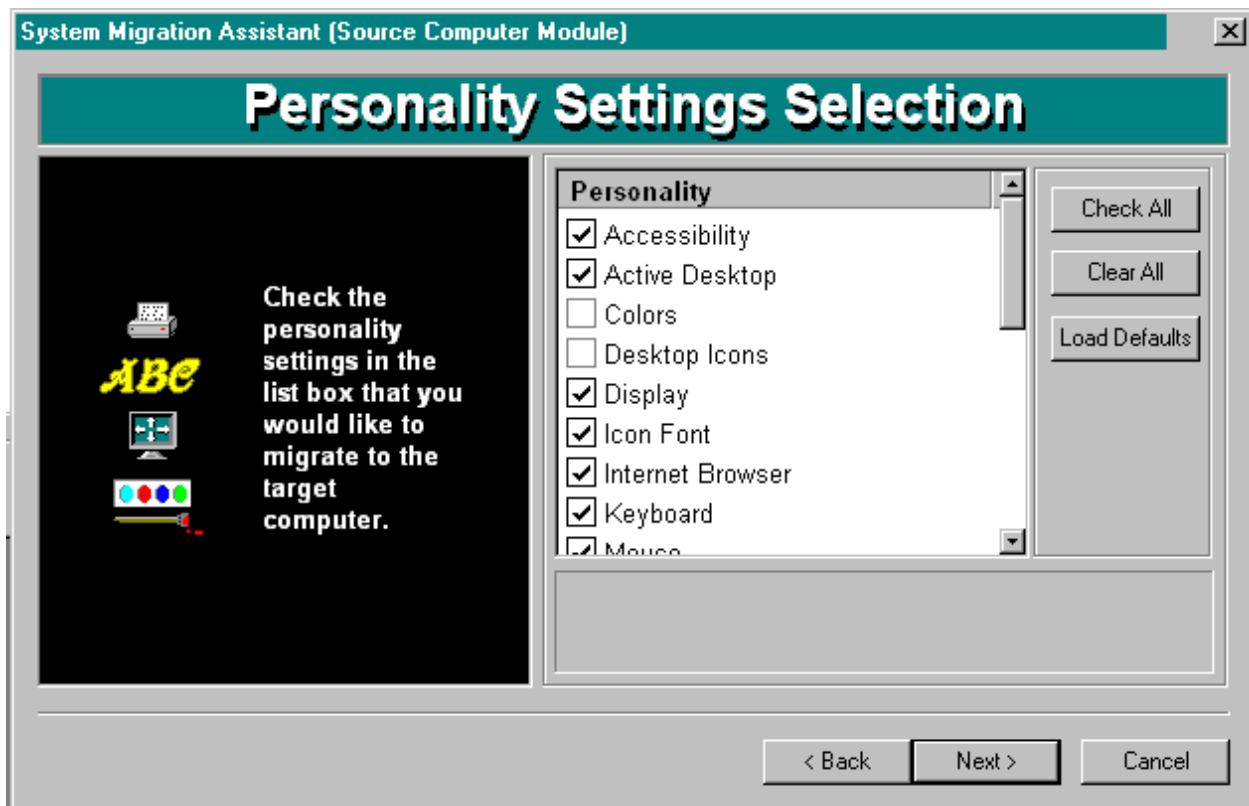


Figure 9-11 Screen to select Windows Personality Settings to migrate

This screen allows you to select the individual groups of settings to migrate. This screen only appears if you checked the **Personality Settings** checkbox on the **Personality Selection Option** screen.

Click **Check All** to select all **Personality** settings to migrate.

Click **Clear All** to deselect all **Personality** settings.

You must select at least one **Personality** setting, you cannot progress to the next screen if you click **Clear All**. If you do not, you return to the **Personality Selection Option** screen so you can clear the checkbox, or click **Cancel** to end the program.

Click **Load Defaults** to load the settings that SMA has checked each time you come to this screen.

To select a personality element for migration click checkbox in the in front of the **Personality** element.

1. Click on **Personality** checkbox for personality element(s) you wish to transfer.
2. Click **Next**.

Note: SMA cannot change or adjust Desktop & Personality settings. SMA allows you to only select the desktop & personality elements you wish to migrate. To adjust your desktop & personality settings, adjust them from the element groups in Windows Control Panel or use a product such as IBM PerSys for Windows.

The desktop & personality elements that can be selected are as followed.

Personality settings	Description
Accessibility	Accessibility settings for keyboard, sound, mouse, and general
Active Desktop	Active state and channels
Colors	Desktop color and window colors
Desktop Icons	Desktop contents: folders, shortcuts, icons, and positions
Display	Desktop width, height, and color depth
Icon Metrics	Icon size, spacing, and title font
Internet Browser	Browser bookmarks and favorites
Keyboard	Caret blink speed, keyboard repeat rate and delay
Mouse	Left or right handed mouse settings, speed, and double-click time
Pattern	Desktop pattern
Printers	Printer drivers and settings
Screen Saver	Current screen saver settings
Send To Menu	Send To menu settings
Shell	View sort order, view type (larger icon, small icon), show/hide status bar/toolbar
Sound	Sound settings
Start Menu	Start menu commands
Task Bar	Docking edge, size, always-on-top, auto hide, show clock, show small icons in Start menu
User Profiles	Saves the profiles of users not currently logged on when SMA is run
Wallpaper	Desktop wallpaper
Window Metrics	Spacing and arrangement order of minimized windows, message dialog font, menu size, scroll bar sizes

For more information on Personality settings and what can and cannot be transferred, see Chapter 4, "Objects that you can migrate on page 29.

9.4.4.12 Selective - Set Connectivity Elements to Migrate

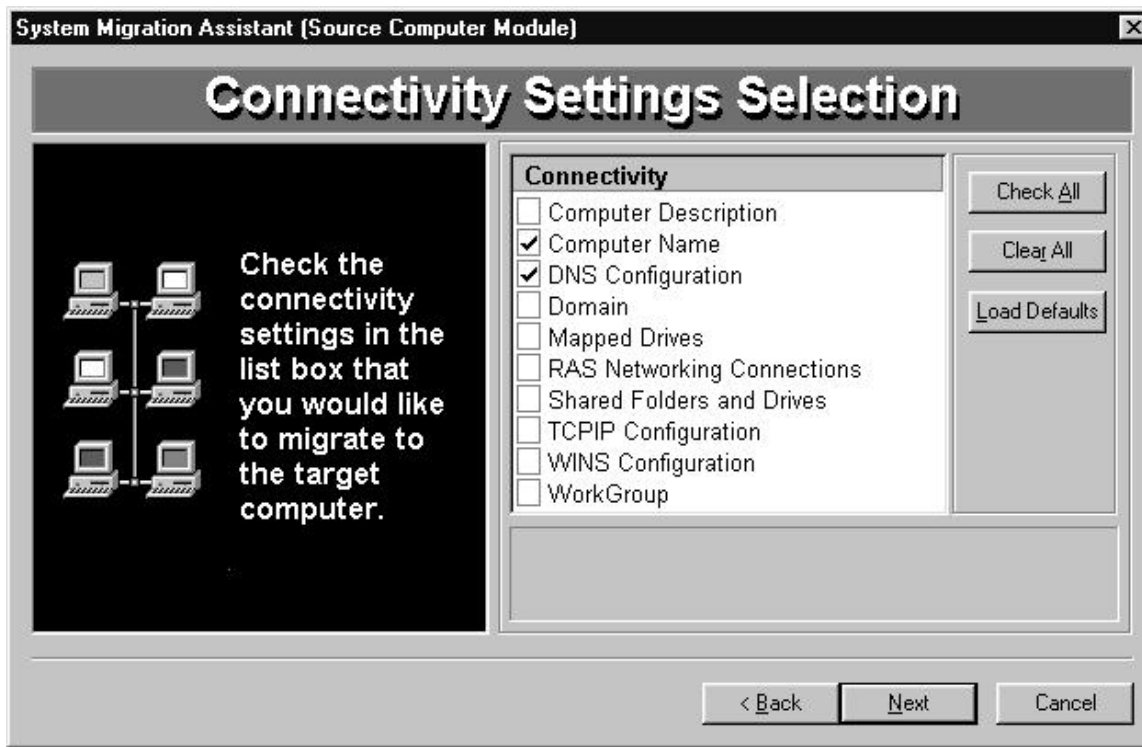


Figure 9-12 Select Connectivity Settings to migrate

This screen only appears if you checked the **Connectivity Settings** checkbox on the **Connectivity Selection Option** screen.

Select Connectivity objects for migration by clicking the checkbox. Selected items have a check in the checkbox. As you highlight each connectivity object, a description of the element appears in the lower textbox.

If you do not wish to select an object, click **Back** and uncheck the Connectivity Option checkbox.

- Click **Check All**: to select all connectivity objects in the list box to migrate to the target computer.
- Click **Clear All**: and all Connectivity objects to clear all checkboxes. It is quick way to clear all checkboxes and then select a couple.
- Click **Load Defaults**: Loads the SMA defaults for migration.

NOTE: You must have at least one Connectivity object selected to progress to the next screen.

To select a **Connectivity** setting to migrate

1. Click **Connectivity** object checkbox.
2. Click **Next**.

Note: SMA cannot change or adjust Windows Connectivity settings. SMA only allows you to select Connectivity elements to migrate only. To adjust your Connectivity settings, adjust them from Windows Control Panel or use a product such as IBM PerSys for OS/2.

The Computer Name and TCP/IP address must be unique on the network.

If you use SMA TARBAT for batch in phase 2, you can change the computer name and the TCP/IP address of the computer by setting them in a command file. See Chapter 10, “Migrating your computer profile to other computers”, page 137. See also Chapter 14.3, “[COMPUTER_NAME] “ on page 166, and Chapter 12.7 “[TCPIP]” on page 170.

Note: SMA will not migrate Network adapters settings, etc. Install the operating system and set the network adapters options as part of the installing the operating system. SMA considers drivers, etc. to be part of the operating system.

The Connectivity object settings that SMA can migrate are:

Connectivity setting	Description
Computer Description	Computer description
Computer Name	Network computer name
DNS Configuration	Domain Name Server search order, domain suffix search order, Host Domain
Domain	Domain information
Mapped Drives	Mapped drives
RAS Networking Connections	Remote Access Services configuration phone book entries for Dial-up networking
Shared Folders and Drives	Shared folders and drives
TCPIP Configuration	IP address, subnet
WINS Configuration	Windows Internet Name Service configuration
Workgroup	Workgroup/Default login domain

For information more information on Connectivity settings and what can and can not be transferred, see Chapter 4, “Objects that you can migrate” on page 29.

9.4.4.13 Selective - Scan hard disk process



Figure 9-13 SMA will build a list of folders and files to work with

This screen appears if you previously selected to migrate files, folders, and/or drives in the **File & Folder Selection Option** screen, or if you selected to migrate files by their extension using the **File Extension Selection Option** screen.

SMA scans your computer to determine what files exist and builds a list of files, folders, and/or drives for you to select from.

To scan your computer for files

1. Click **Scan** if you wish to begin scanning the files on your computer.

9.4.4.14 Selective - Scan hard disk process complete



Figure 9-14 SMA completed scan of drives, folders, and files.

With this screen, SMA informs you that it has finished scanning your computer.

SMA constructed a list of all drives, folders, files and file extensions that exist.

To begin selecting the items you wish to migrate click **N**ext.

9.4.4.15 Selective - Select files to migrate by File extensions

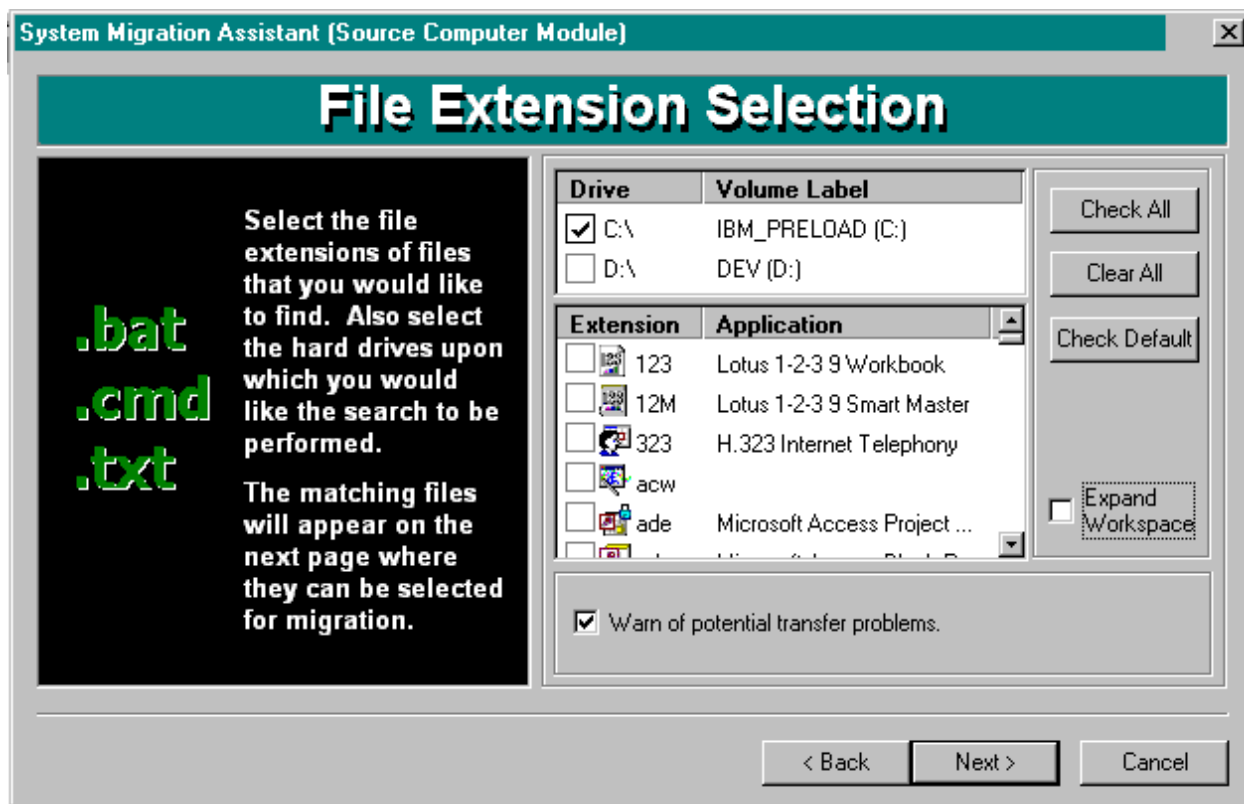


Figure 9-15 Select files to migrate by file extension

Using SMA, you can choose to copy files to the target computer based on their file extension. For example, selecting the extension “.doc” will select all files with that extension on all drives specified, in all folders to copy to the target computer.

SMA lists the disk drives on the source computer and displays a list of file extensions available to select. SMA displays the application associated with the file extension. **NOTE:** The applications listed will **not** be copied to the target computer, only the file by file extension selected.

All files with the extensions selected will be migrated to the target computer. SMA will search for files from the drives selected.

- Select **Check All**: check box to choose all file extensions displayed in the list box for migration.
- Select **Clear All**: check box to deselects all file extensions.
- Select **Load Defaults**: check box to load the default file extensions
- Select **Warn of potential transfer problems**: checkbox if you want SMA to warn you of problems that might occur. See this chapter, section 9.3.3 “Drive, Folder, and file considerations” page 60, for information on potential file transfer problems.

To select files by file extension to migrate

1. Click the disk **Drive** checkbox of the drives you wish to migrate files from.
2. Click the **Extension** checkbox of the file extensions you wish.
3. Click **Next**.

SMA then builds a list of all files by the file extensions selected to copy to the target computer.

9.4.4.16 Selective - List of files with file extension.

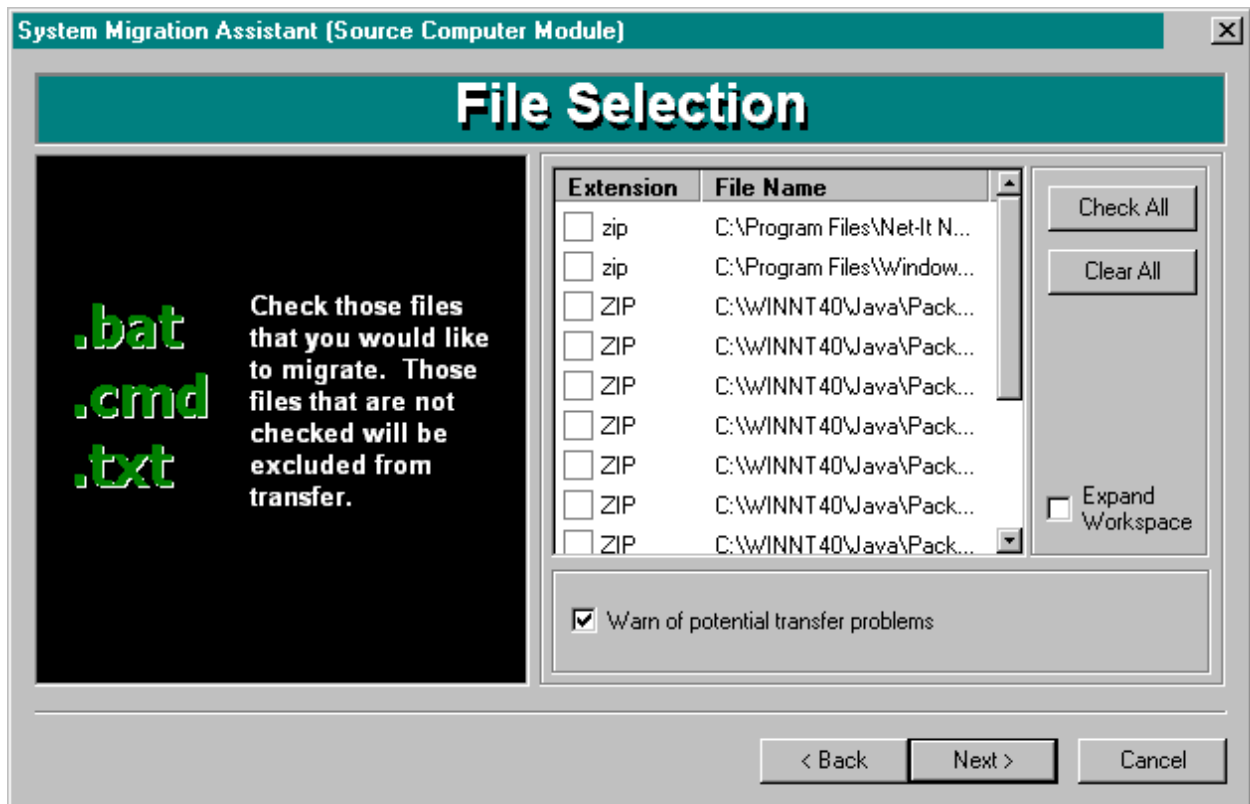


Figure 9-16 Review the files selected by file extension

The list box displays files found by SMA with the extensions you selected. You can review the files sorted by extension to see if you want to deselect any. It provides you a chance to further refine list of files.

Click **Check All**: to check all files to copy to the target computer.

Click **Clear All**: to deselect all files. You must have at least one file selected to be able to progress to the next screen.

To use this screen

1. Review the files selected.
2. Click **extension** checkbox to de-select/select any files to migrate.
3. Click **Next**.

In selecting some files, you may receive the following warning message. “A file has been selected that may lead to problems on the target computer. Application files can be transferred, but they WILL NOT lead to the application being able to function on the target computer”.

Cause is selecting a file with extension .EXE, etc. The problem is due that SMA will not adjust the Windows Registry in this process.

Remedies:

- Transfer the application if it will work without requiring Registry Entries, e.g., it is a DOS application.

- Do not migrate.
- Install application new on target computer.
- Have SMA do a mass migration which will migrate and register all applications.

9.4.4.17 Selective - Select Files & Folders to migrate

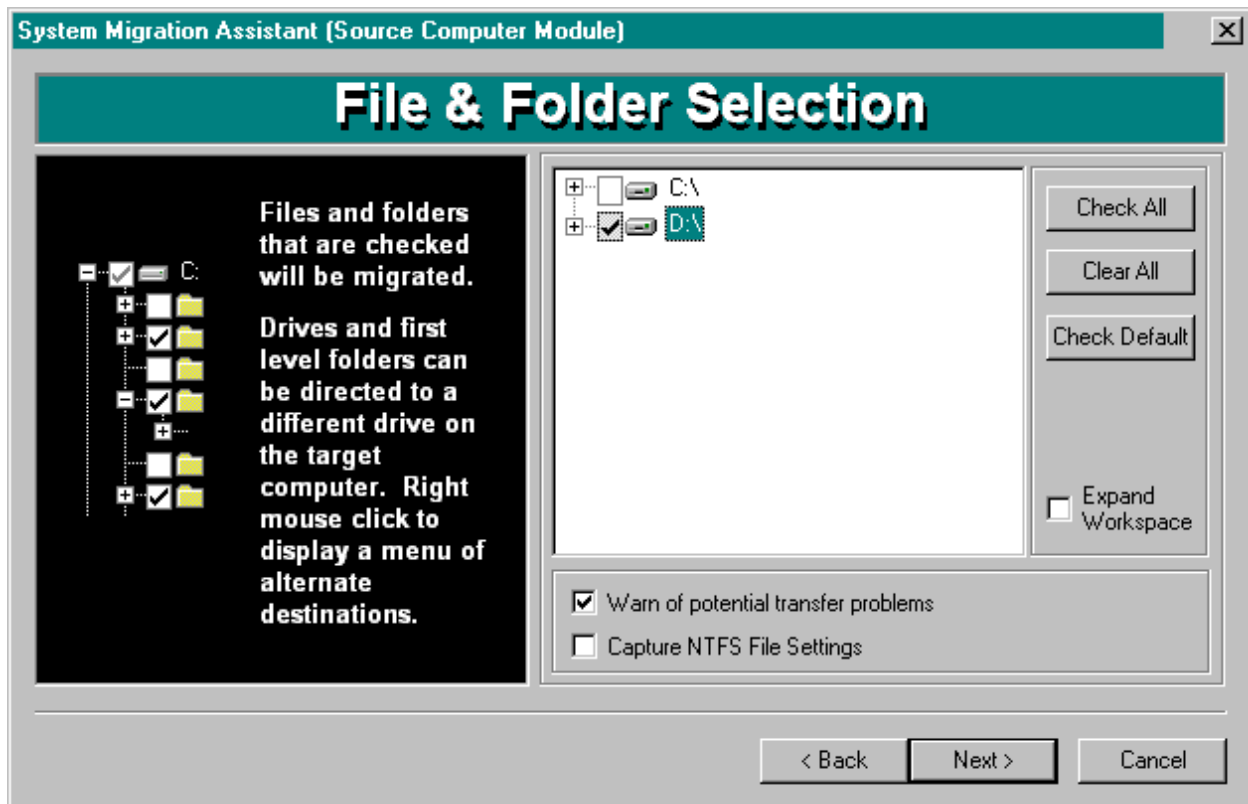


Figure 9-17 Select drives, folders, and/or files to migrate




The folder tree allows you to select:

- Disk drives
- Folders
- Files

Click “+” or “-“ to open/close disk drive or folders.

- Click **Check All**: to select all files and folders on all drives.
- Click **Clear All**: to deselect all files.
- Click **Check Default**: to select the defaults that SMA has chosen.
- Click **Warn of potential transfer problems**: to be informed of potential problems in transferring files to the target computer.
- Click **Capture NTFS File Settings**: to copy the NTFS file attributes to the target computer. This will work only if the source machine drive is NTFS, and the drive on the target machine that the files are being transferred to is also NTFS.

To select files, folders, and/or disk drives to copy to the target computer.

1.
 - Select **disk drive**  checkbox to choose all folders and files on the disk.
 - Select **folder**  checkbox to choose all files and folders inside folder.
 - Select **file**  checkbox to select any individual files to copy to the target computer.
2. Click **Next**.

You can copy the disk drive on the source computer to a different drive on the target computer. To do it:

1. *Right* click **disk drive**.
2. Click target computer **disk drive letter**.

To copy a folder on the source computer to a different drive on the target computer:

1. *Right* click **folder**.
2. Click target computer **disk drive letter**.

In selecting some files, you may receive the following warning message. “A file has been selected that may lead to problems on the target computer. Application files can be transferred, but they WILL NOT lead to the application being able to function on the target computer”.



Figure 9-18 Warning message if drive other than "c:" is selected.

Cause is selecting a file with extension .EXE, etc. The problem is due that SMA will not adjust the Windows Registry in this process.

Remedies:

- Transfer the application if it will work without Registered, e.g., it is a DOS application.
- Do not migrate.
- Install application new on target computer.
- Have SMA do a mass migration which will migrate and register all applications.

9.4.4.18 Selective - Set SMA output configuration files location

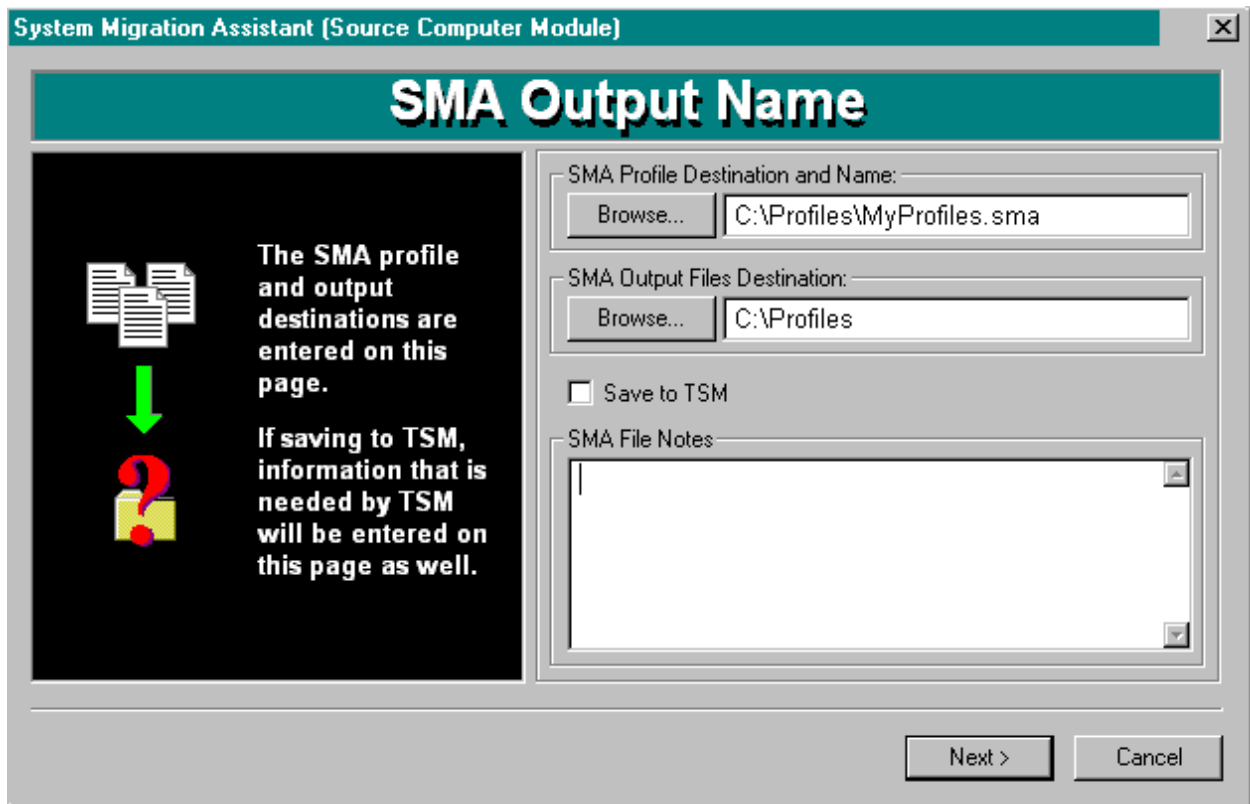


Figure 9-19 Set disk drive(s) location, and filenames of SMA output migration files.

This screen allows you to name the location and filenames of the SMA profile and SMA output files. It also allows you to save them to a TSM server. There is also a text box where you can write notes about your migration into the profile.

This is the last screen before SMA begins writing the profile of your selections on this and the previous screens to disk.

SMA displays highlighted the default “.SMA” file name and location.

9.4.4.18.1 To select your own profile filename and path

Type a different file or location in **SMA Profile Destination and Name** textbox, if desired. If you don't, SMA will use the default “C:\PROGRAM FILES\IBM\SMA\PROFILES\DEFAULT.SMA” as the profile filename.

- To accept the default folder, click **Finish**. You will then go to the next screen.
- To select your own profile filename and location, type the profile filename in **SMA Profile Destination and Name**.
- To select a file on your computer, click **Browse**.

NOTE: The profile filename you give must have the extension “.SMA”.

9.4.4.18.2 To select a filename and path for the SMA Output Files

- To give your own SMA output files a filename and location, type the profile filename in **SMA Output Files Destination**.
- To select a file on your computer, click **Browse**.

9.4.4.18.3 To write comments in SMA File Notes

Type comments, explanations, remarks and notes in **SMA File Notes** text box. For example, you may wish to remind yourself of what you selected, or you wish to identify often-used migration profiles, e.g., as company standard base-computer profile, or accounting department profile.

9.4.4.18.4 To save your migration profile to TSM

1. Select **Save to TSM** checkbox.
2. Type in **TSM Node ID** your TSM user id.
3. Type in **TSM Password** your TSM password.
4. Type in **TSM Server** the name of your TSM server.

9.4.4.18.5 When you are finished with all of your migration choices on all screens

Click **Finish**.

SMA will begin writing the migration profile for the source computer to disk.

9.4.4.18.6 Potential problems

SMA Determines if the profile file already exists.

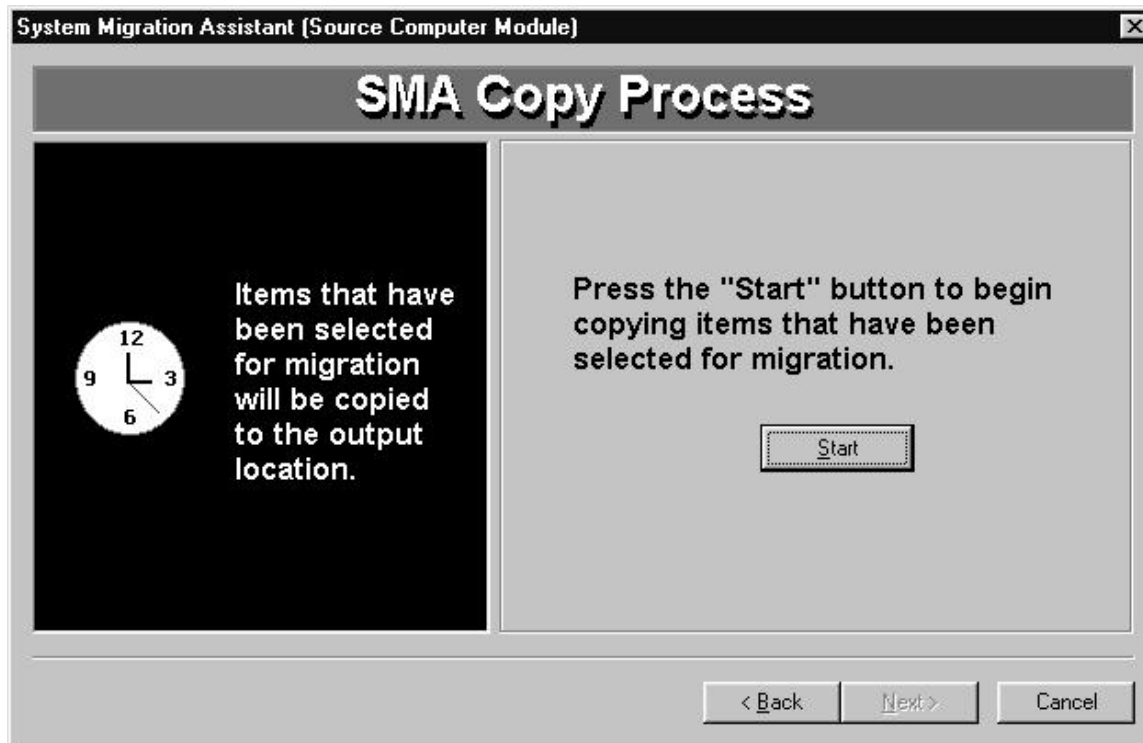
If it does it will prompt you that “The file already exists. Would you like to overwrite this file? (Yes/No)”

If you selected files that are currently in use by other programs – you will get the following screen:



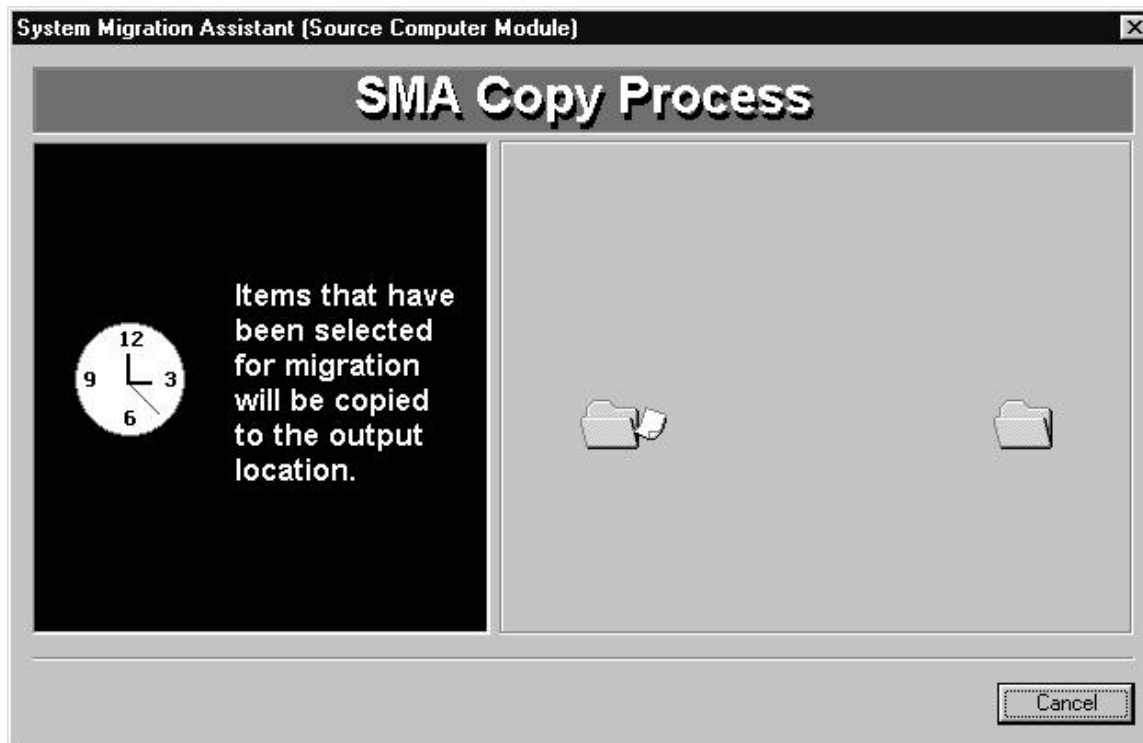
Figure 9-20 The files selected for migration are in use by another process.

9.4.4.19 Selective - Verify SMA Migration process to begin



Click **Start** to begin copying migration objects to the migration profile files.

9.4.4.20 Selective - SMA copy in progress



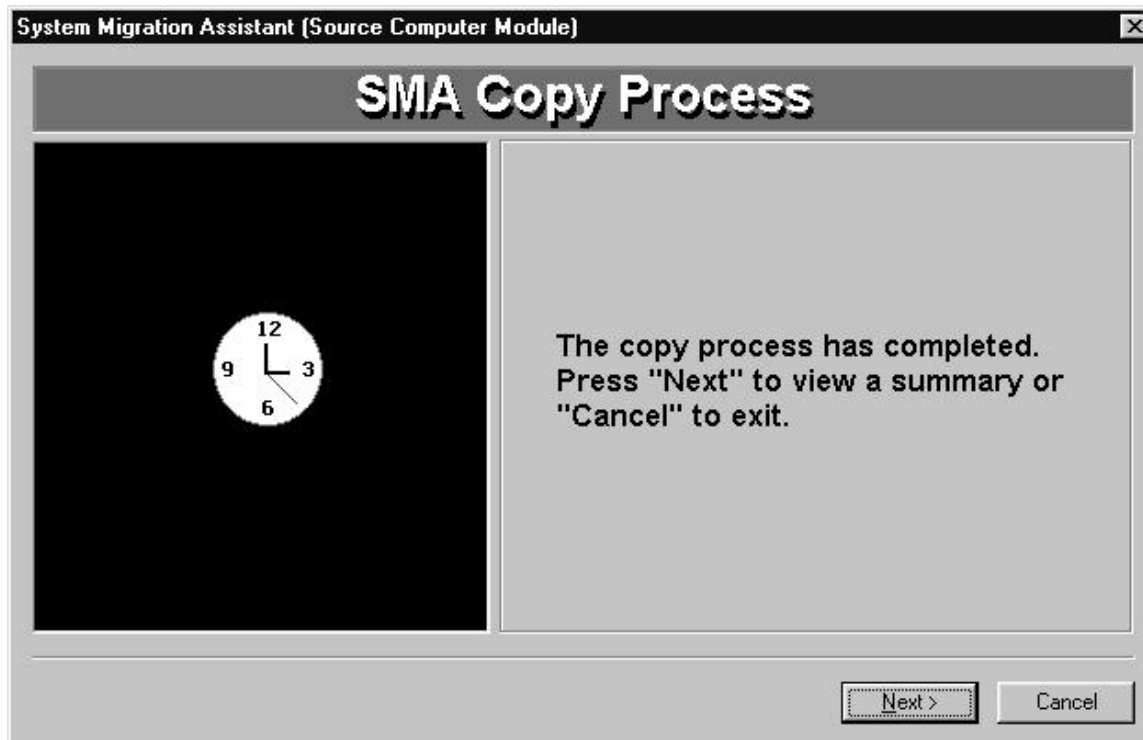
The screen then shows that SMA is writing the migration profile. SMA shows it is writing the profile by the document flying from one folder to the destination folder.

Wait until the process is completed.

Click **Cancel** if you wish to abort the process. The SOURCE program will end.

9.4.4.21 Selective - SMA migration completed screen

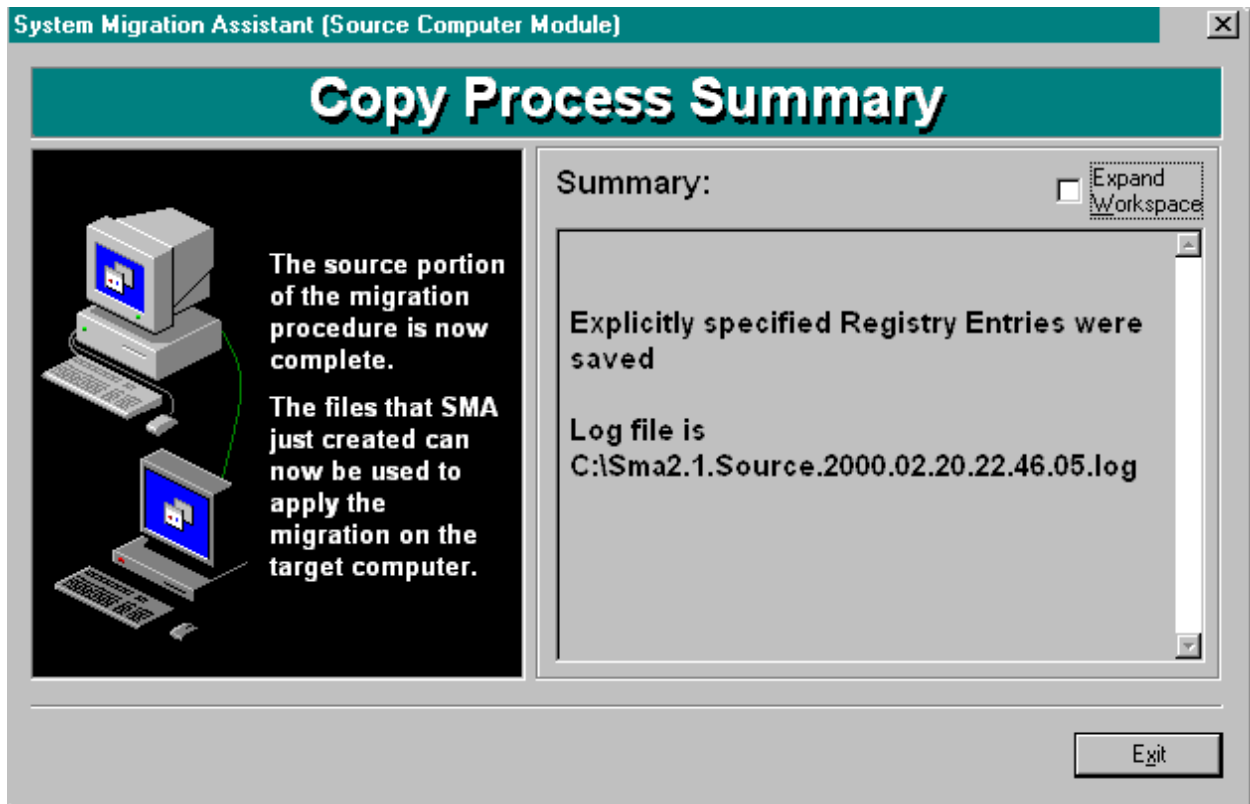
Once SMA has finished writing the profile, it displays this screen.



You can either:

- Click **Next** to see a report on the migration.
- Click **Cancel** to exit the program without seeing the report.

9.4.4.22 Selective - SMA finished summary



SMA displays a summary report of what happened during the migration.

- SMA reports on **errors** that might have occurred. In the above figure, there were no errors.
- SMA displays the **source drive** of where SOURCE was started from.
- The **Destination Drive** is the location you specified for the SMA profile.
- SMA reports the number of **Files** copied
- The migration profile file size is reported in **Bytes**.

To end the SOURCE program, click **Exit**.

You need to begin the second phase of SMA. Either copy the profile to the target computer, or make sure that the folder where store the profile has share authority for you to access it from the target computer.

Use TARGET or TARBAT to finish the migration process on the target computer. See Chapter 10, "Migrating your computer to other computers", page 117. To use TARGET, see page 121. To use TARBAT, see page 137.

9.4.5 Using SOURCE to do a Mass migration

9.4.5.1 Overview

System Migration Assistant can interactively work with you to generate the list of user preferences and applications you wish to replicate on another computer. Mass Migration copies all your application software and Windows settings to another computer.

There are two types of migrations: Selective & Mass.

This section informs you how to do a Mass migration. System Migration Assistant performs the migration in two phases.

In the first phase, SMA captures the objects to migrate and writes the profile to file. This chapter deals with the first phase.

You must use SMA to capture the work environment of a computer to clone. This process creates migration profile files that needed for input to the second phase.

SMA must run on the computer to clone for the first phase of the migration. The SMA program must run on the target machine for the second phase of the migration.

In the second phase, SMA on the target computer obtains instructions on the migration from the migration profile files and from an optional command file. SMA then locates the objects and migrates them to the target computer from the source computer. For information on how to accomplish the second phase, refer to Chapter 10, "Migrating your computer profile to other computers", on page 117.

The migration profile provides the second phase a list of objects and settings to migrate. The command file provides additional instructions for SMA to perform.

System Migration Assistant can generate the list of user preferences and applications to copy to another computer when the user is not at the work site, for example, late at night.

9.4.5.2 Concepts

The Windows SMA program you will use is named SOURCE. SOURCE is a program that copies migration objects to transfer to the target computers.

SOURCE works with you interactively to make the list of migration objects. It also wants the location of where to put the list.

When you finish making the list, SOURCE processes the list of migration objects. SOURCE obtains data settings from Windows OS and Registry, then outputs the list of migration objects and migration command & data instructions to files.

Once this is accomplished, you must either run on the target computer the Windows-based TARGET, or batch mode TARBAT. These will copy applications, files, and settings to the target computer and register them.

Refer to the Figure on page 62 to see how the screens work in sequence for Mass Migration.

9.4.5.3 Requisites

You must set all Desktop & Personality and Connectivity Settings through Control Panel prior to migration.

This is the best time to put in company standard wallpaper, screen savers, etc.

Before migration, configure all application software to the way you want them.

Don't forget that this is the best time to put company standard word processing templates in place, forms, etc.

9.4.5.4 Using SOURCE for Mass Migration

9.4.5.5 Mass - Starting the SMA SOURCE for Mass Migration

To start SMA from the Windows **Start** taskbar menu:

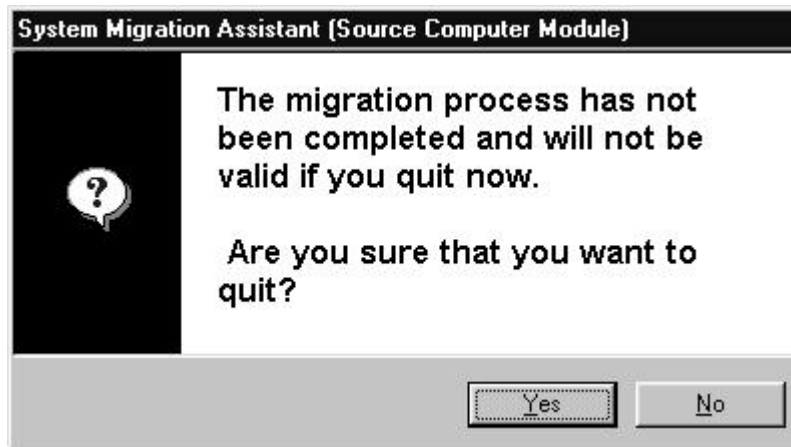
Click Windows taskbar **Start** → **Programs**→**IBM System Migration Assistant**→**SOURCE**

Windows starts System Migration Assistant **SOURCE** application.

9.4.5.6 Mass - Canceling Out of the Program

You can stop the migration process at any time.

1. Click **Cancel** button on any screen. SMA informs you that the program will end. SMA prompts to confirm you wish to terminate the program.



2. Click **Yes**.

SMA will remove any output files created, and will return you to the Windows.

9.4.5.7 Mass - Close other application screens

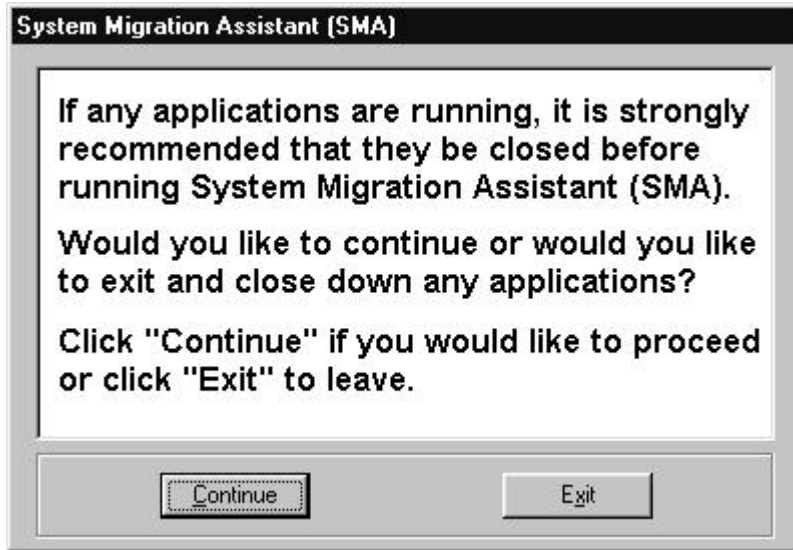


Figure 9-21 Close all applications before running SMA

System Migration will work best if no other applications are running at the same time. Close your applications. Close your applications. Either click **Exit** or close them before you click **Continue**.

Example:

1. Close any application you have running.
2. Click **Continue**

9.4.5.8 Mass - System Migration ASSISTANT (SOURCE)

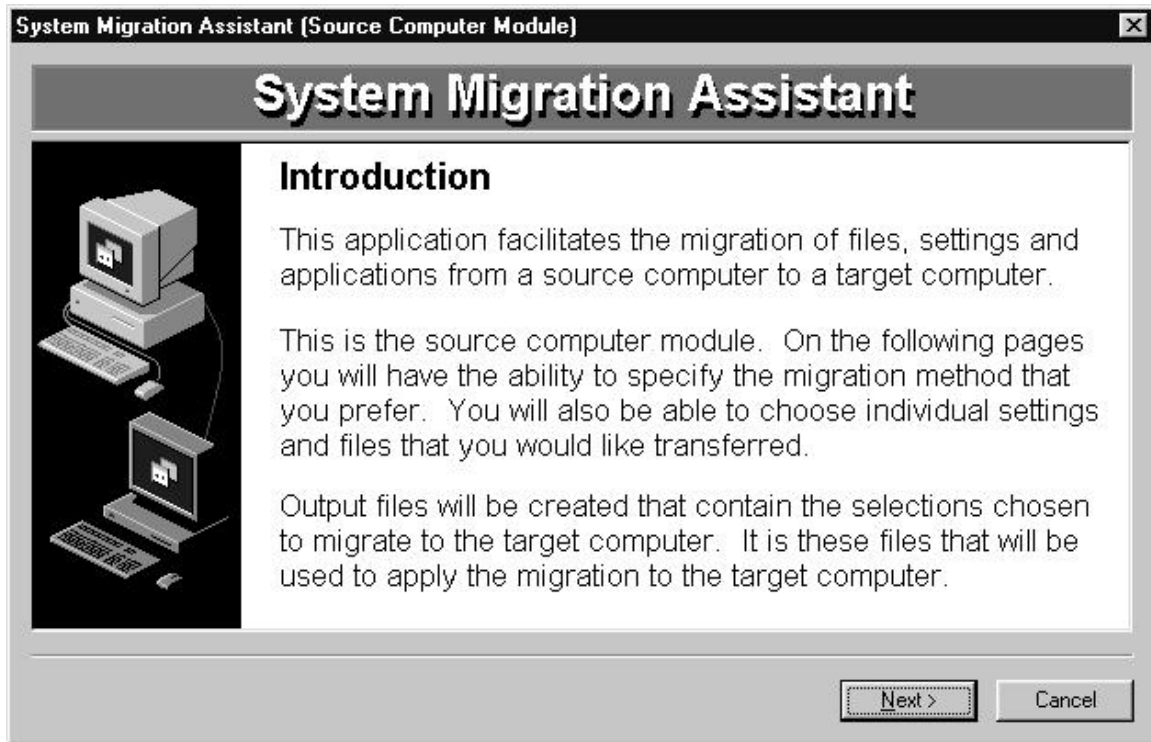


Figure 9-22 System Migration Assistant Introduction Screen

This is the SOURCE introduction screen. Read the information.

Click **Next** to continue to the next screen.

9.4.5.9 Mass - Migration Method Information

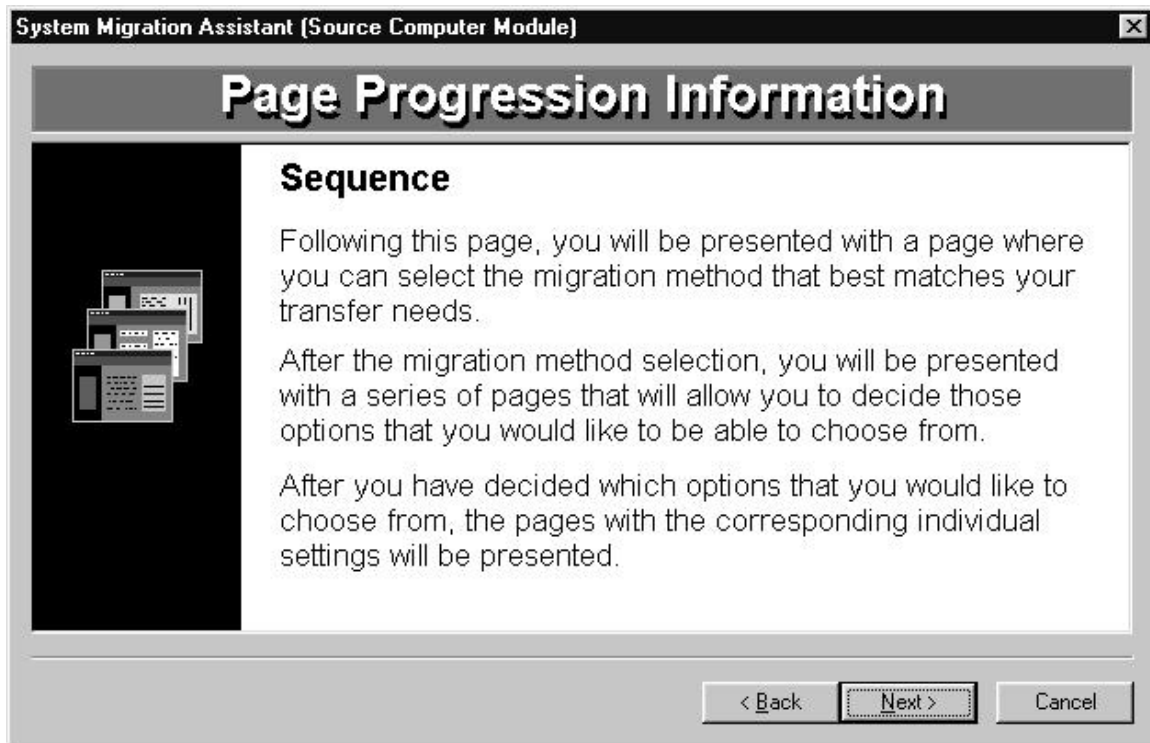


Figure 9-23 Information Screen on Selecting Migration Type

Read the information on the screen. Click **Next** to progress to the next screen.

9.4.5.10 Mass - Select Migration Method to Mass Migration

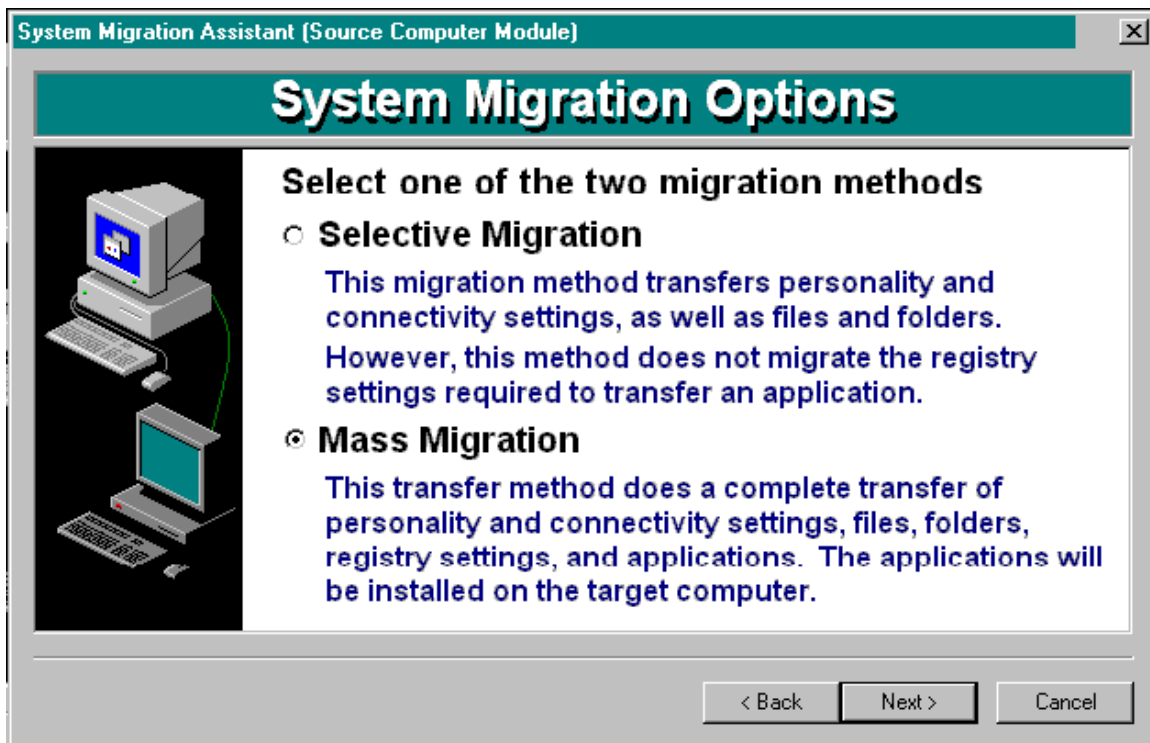


Figure 9-24 Select Migration Type to Mass Migration

This screen allows you to choose between doing a selective transfer or a complete transfer.

- A selective migration allows you to choose which objects you wish to migrate. You can choose to migrate Desktop & Personality elements, Connectivity elements or Folders & Files. You cannot migrate application software, such as spreadsheets, word processors, etc.
- Mass migration replicates all application software, desktop & personality settings, connectivity settings, files & folders. The target computer will be the same as the source computer.

These are the instructions for making a **Mass Migration**

To do a mass migration

1. Click **☉ Mass Migration**
2. Click **Next** to continue to the next screen.

9.4.5.11 Mass - Select to Migrate Files & Folders Option

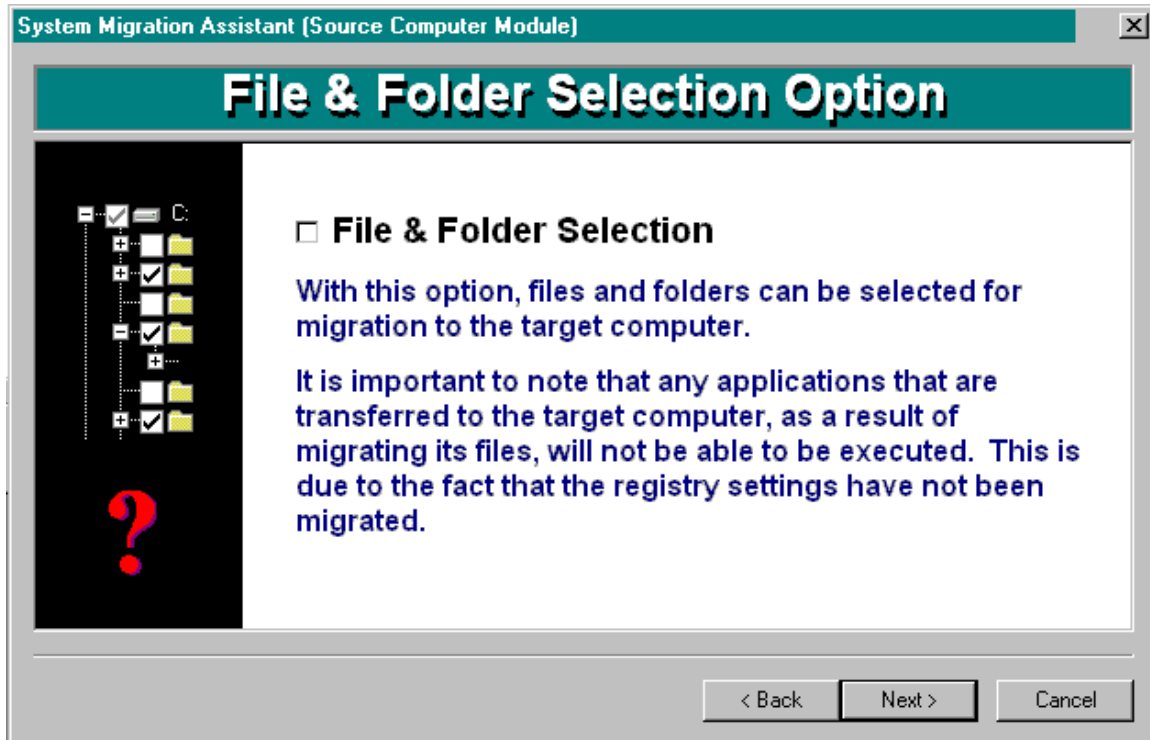


Figure 9-25 Option to select files & folders.

This option to enables you to select disk drives, folders, and files to migrate to the target computer.

To be able to select your choice of files, folders, and/or drives to migrate

3. Select **File & Folder Selection** checkbox if you wish to migrate files by this method.
4. Click **Next**.

9.4.5.12 Mass - Scan hard disk process



Figure 9-26 SMA will scan files.

This screen appears if you previously selected to migrate files, folders, and/or drives in the **File & Folder Selection Option** screen, or if you selected to migrate files by their extension using the **File Extension Selection Option** screen.

SMA scans your computer to determine what files exist and builds a list of files, folders, and/or drives for you to make selections from.

To scan your computer for files

2. Click **Scan** if you wish to begin scanning the files on your computer.
3. Click **Next**.

9.4.5.13 Mass - Scan hard disk process complete



Figure 9-27 Scan of files & folders completed.

With this screen, SMA informs you that it has finished scanning your computer.

SMA constructed a list of all drives, folders, and files that exist on your computer.

To begin selecting the items you wish to migrate click **Next**.

9.4.5.14 Mass - Select Files & Folders to migrate

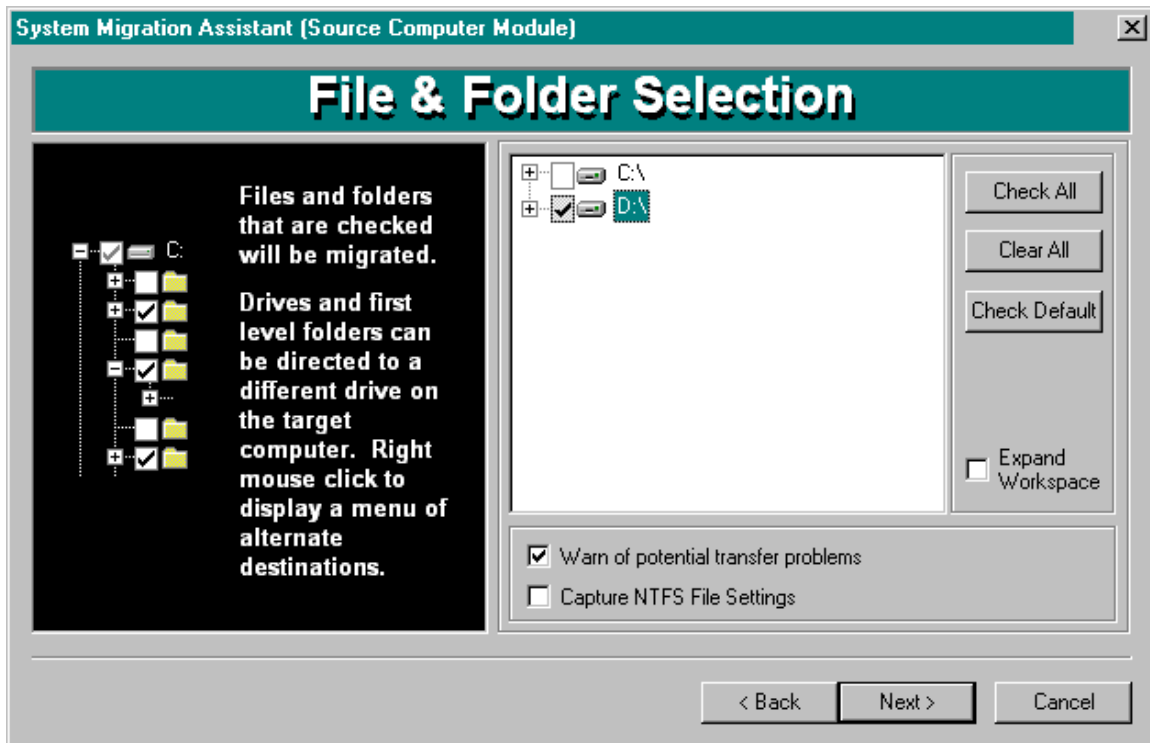


Figure 9-28 Select disk drives, folders and/or files to migrate.

The folder tree allows you to select:

- Disk drives
- Folders
- Files

Click “+” or “-“ to open/close disk drive or folders.

- Click **Check All**: to select all files and folders on all drives.
- Click **Clear All**: to deselect all files.
- Click **Check Default**: to select the defaults that SMA has chosen.
- Click **Warn of potential transfer problems**: to be informed of potential problems in transferring files to the target computer.
- Click **Capture NTFS File Settings**: to copy the NTFS file attributes to the target computer.

To select files, folders, and/or disk drives to copy to the target computer.

2.

- Select **disk drive** checkbox to choose all folders and files on the disk.
- Select **folder** checkbox to choose all files and folders inside folder.

- Select **file** checkbox to select any individual files to copy to the target computer.

2. Click **Next**.

You can copy the disk drive on the source computer to a different drive on the target computer. To do it:

3. *Right* click **disk drive**.
4. Click target computer **disk drive letter**.

To copy a folder on the source computer to a different drive on the target computer.

3. *Right* click **folder**.
4. Click target computer **disk drive letter**.

In selecting some files, you may receive the following warning message. “A file has been selected that may lead to problems on the target computer. Application files can be transferred, but they WILL NOT lead to the application being able to function on the target computer”.



Cause is selecting a file with extension .EXE, etc. The problem is due to SMA not adjusting the Windows Registry in this process.

Remedies:

- Transfer the application if it will work without Registered, e.g., it is a DOS application.
- Do not migrate.
- Install application new on target computer.
- Have SMA do a mass migration which will migrate and register all applications.

9.4.5.15 Mass - Set SMA output configuration files location

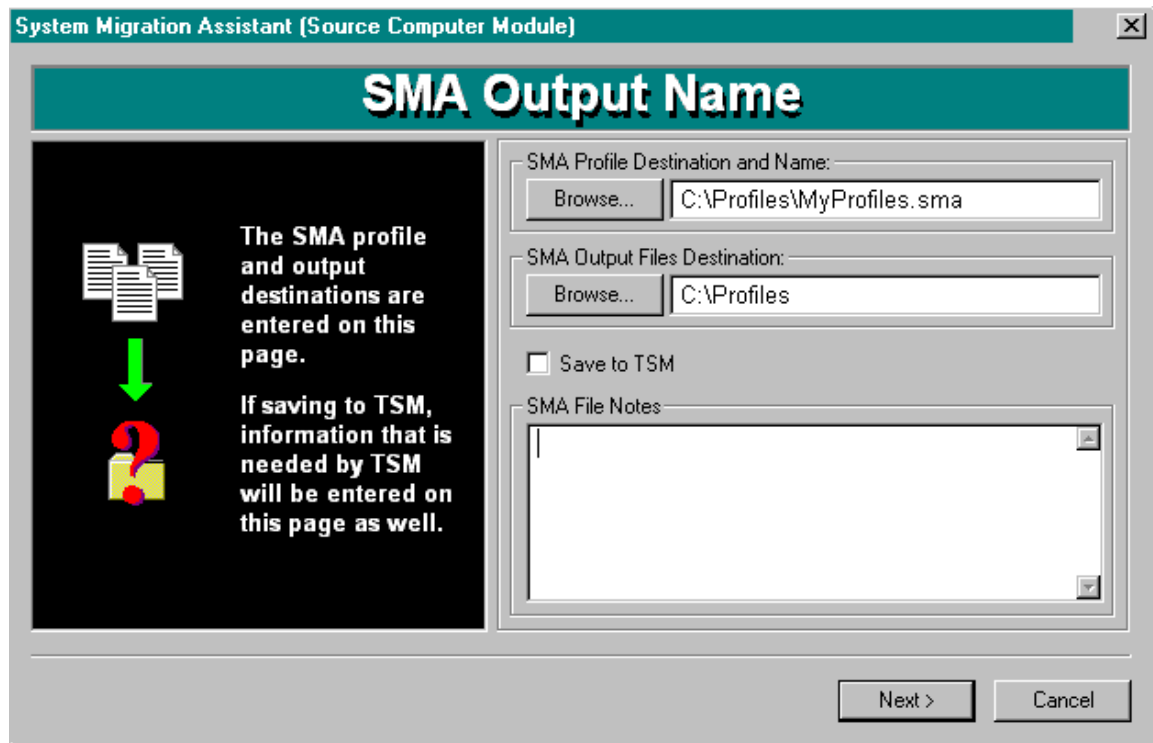


Figure 9-29 Set the folder path where SMA will be installed to.

This screen allows you to name the location and filenames of the SMA profile and SMA File Contents Path. It also allows you to save them to a TSM server. There is also a text box where you can write notes about your migration into the profile.

This is the last screen before SMA begins writing the profile of your selections on this and the previous screens to disk.

SMA displays highlighted the default “.SMA” file name and location.

9.4.5.15.1.1 To select your own profile filename and path

Type a different file or location in **SMA Profile Path and Name** textbox, if desired. If you don't, SMA will use the default “C:\PROGRAM FILES\IBM\SMA\PROFILES\DEFAULT.SMA” as the profile filename.

- To accept the default folder, click **Finish**. You will then go to the next screen.
- To select your own profile filename and location, type the profile filename in **SMA Profile Path and Name**.
- To select a file on your computer, click **Browse**.

NOTE: The profile filename you give must have the extension “.SMA”.

9.4.5.15.1.2 To select a filename and Path for the SMA File Contents Path

- To give your own SMA File Contents Path filename and location, type the profile filename in SMA File Contents Path.
- To select a file on your computer, click **Browse**.

9.4.5.15.1.3 To write comments in SMA File Notes

Type comments, explanations, remarks and notes in **SMA File Notes** text box. For example, you may wish to remind yourself of what you selected. Or, you wish to identify often-used migration profiles, e.g., as company standard base-computer profile, or accounting department profile.

9.4.5.15.1.4 To save your migration profile to TSM

5. Select **Save to TSM** checkbox.
6. Type in **TSM Node ID** your TSM user id.
7. Type in **TSM Password** your TSM password.
8. Type in **TSM Server** the name of your TSM server.

9.4.5.15.1.5 When you are finished with all of your migration choices on all screens

Click **Finish**.

SMA will begin writing the migration profile for the source computer to disk.

9.4.5.15.1.6 Potential problems

SMA Determines if the profile file already exists.

If it does it will prompt you that “The file already exists. Would you like to overwrite this file? (Yes/No)”

If you selected files that are currently in use by other programs – you will be prompted so.

9.4.5.16 Mass - Begin SMA Migration process

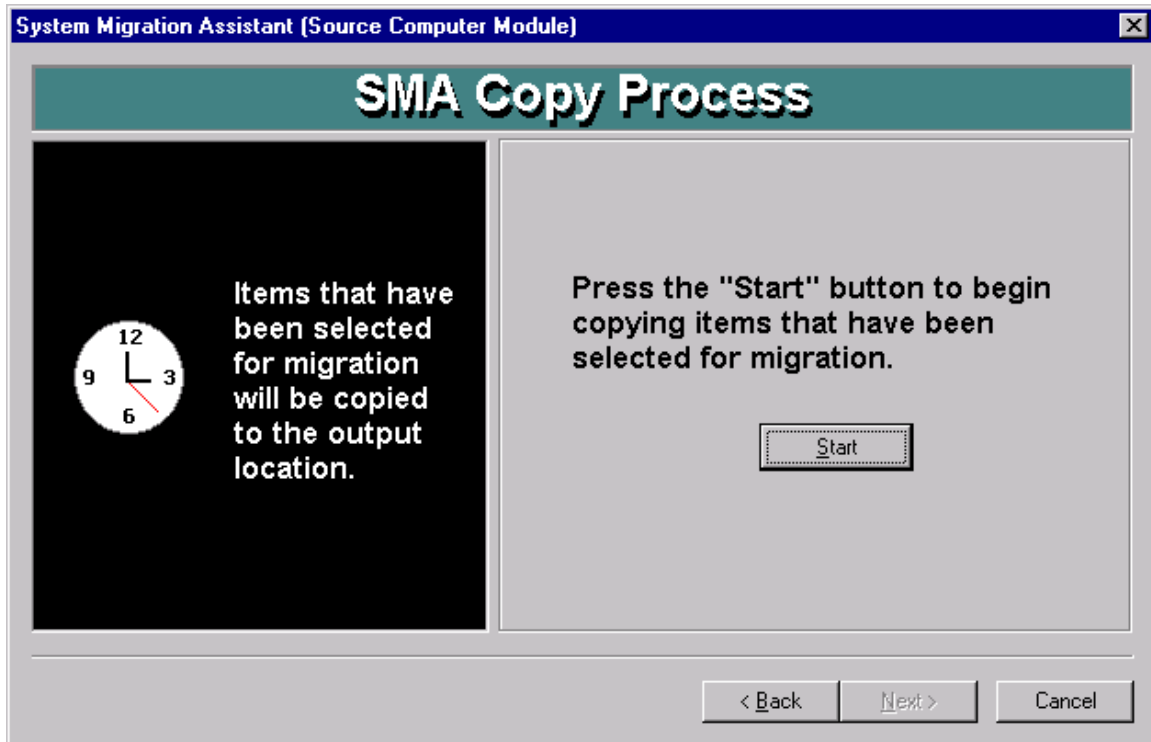
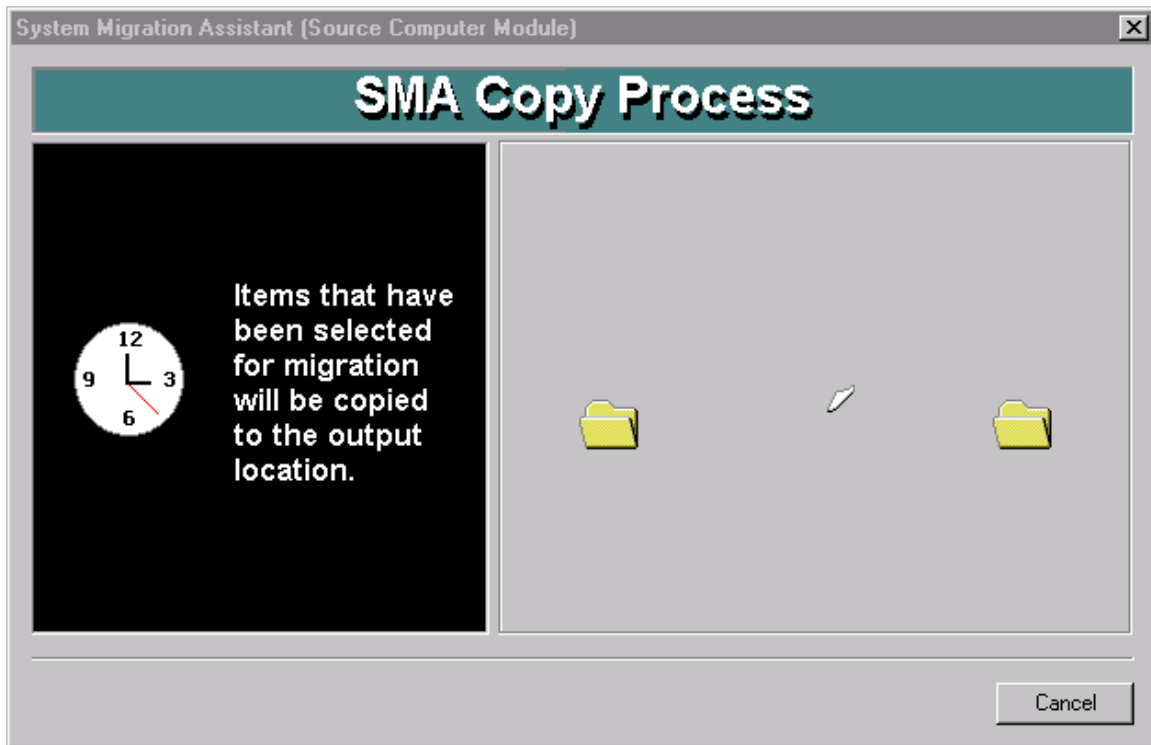


Figure 9-30 Begin writing computer profile for migration.

Click **Start** to begin copying items selected for migration. This will create the source computer migration profile.

9.4.5.17 Mass - SMA copy in progress



This screen shows that SMA is writing the migration profile. SMA shows it is writing the profile by the document flying from one folder to the destination folder.

Wait until the process is completed.

Click **Cancel** if you wish to abort the process. The SOURCE program will end.

9.4.5.18 Mass - SMA finished summary

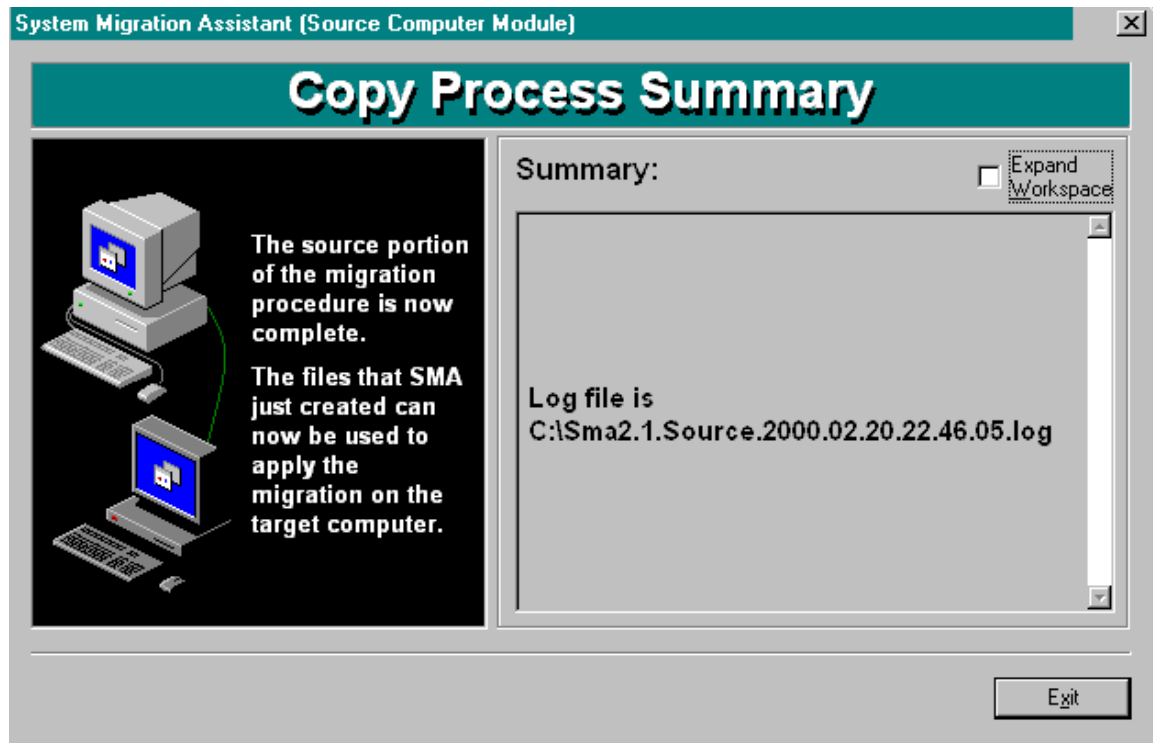


Figure 9-31 SMA provides a summary of the first phase.

SMA displays a summary report of what happened during the migration.

- SMA reports on **errors** that might have occurred. In the above figure, there were no errors.
- SMA displays the **source drive** of where SOURCE was started from.
- The **Destination Drive** is the location you specified for the SMA profile.
- SMA reports the number of **Files** copied
- The migration profile file size is reported in **Bytes**.

To end the SOURCE program, click **Exit**.

You need to begin the second phase of SMA. Either copy the profile to the target computer, or make sure that the folder where store the profile has share authority for you to access it from the target computer.

Use TARGET or TARBAT to finish the migration process on the target computer. See Chapter 10, "Migrating your computer to other computers", page 117. To use TARGET, see page 121. To use TARBAT, see page 137.

9.4.5.19 Mass - Record Computer Name and SMA output location

You will need to remember the migration profile filename and path. This is needed for the second phase.

9.5 SMA Batch Mode – Using SRCBAT

9.5.1 Batch Overview

System Migration Assistant can generate the list of user preferences and applications to copy to another computer when the user is not at the work site, for example, late at night.

System Migration Assistant performs the actual migration in two phases.

In the first phase, SMA captures the objects to migrate and writes the profile to file.

This chapter deals with the first phase. You must use SMA to capture the work environment of a computer to clone. This process creates migration profile files that needed for input to the second phase.

SRCBAT is a program that makes a profile to transfer. SRCBAT does not prompt the user interactively for data. SRCBAT requires a command file to operate.

SRCBAT reads the command file. The command file gives SRCBAT instructions on the type of migration, and the objects to migrate. SRCBAT processes the command file, obtains data from Windows OS and Registry, and then outputs files with migration command & data instructions.

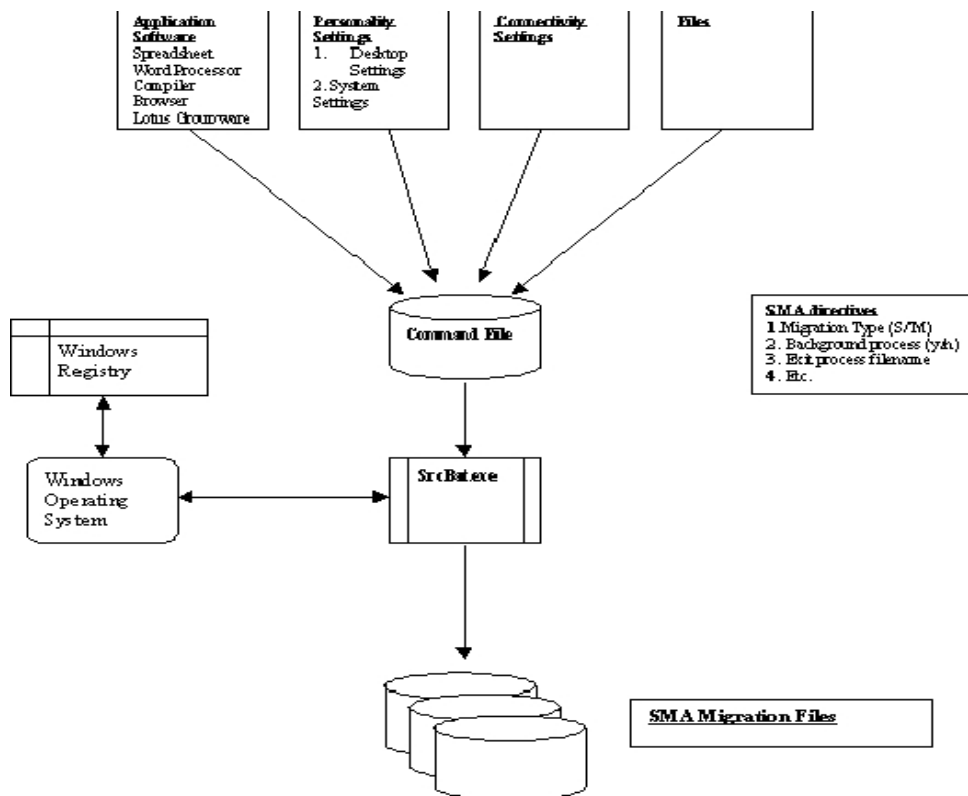


Figure 9-32 SRCBAT process

After SRCBAT writes the migration profile files, it is necessary to run either TARBAT or TARGET on the target computer you wish to migrate objects to. TARBAT or TARGET will process the migration command & data files, and configure the target computer's OS and registry files. For instructions on running TARBAT or TARGET, see Chapter 10, "Migrating your computer profile to other computers", on page 117.

9.5.2 Concepts

SRCBAT is executable at the command line prompt or automated by using batch and scripts programs.

A command prompt is a Windows operating system command interpreter shell window.

Batch files, also called batch programs, contain series of operating system commands processed sequentially. A batch file can have either a CMD or BAT extension. Batch files can execute SRCBAT.

Scripts can execute from the Windows Desktop itself, automate tasks, and perform system operations. There are many scripting languages available, for example, Perl and REXX

9.5.3 Requisite information prior to making a migration profile

Before running SRCBAT, you must create a command file for SRCBAT. SRCBAT must be run from the computer to clone. SRCBAT must be run with Windows Administrator authority.

If migrating connectivity settings, remember the computer name and computer TCP/IP address must be unique.

Network migrations require that all drives, folders, and/or files to be migrated must have share rights set on the source computer for the target computer to access the migration objects stored there. This is one reason why Administrator authority is used. If you don't use Administrator logon, all files must be set to share.

This is the best time to put in company standard wallpaper, screen savers, etc.

Don't forget that this is the best time to put company standard word processing templates, forms, etc. in place.

Before Mass migration, configure all application software to the way you want them.

9.5.4 Working with SRCBAT input command file

SRCBAT receives commands on how to make a migration file from the command file. The command file provides SRCBAT with information and objects to migrate. There is a template command file provided in C:\PROGRAM FILES\IBM\SMA\SRCCOMMANDFILE.TXT. Make a copy of C:\PROGRAM FILES\IBM\SMA\SRCCOMMANDFILE.

Edit the copy and place in the SRCBAT commands as you need them.

9.5.5 Using SRCBAT

9.5.5.1 Using SRCBAT at Command Line.

SRCBAT can be run from the Command line. You can operate it from the command line to do migrations, or you can test the program from there.

A. Make a command file using your favorite word processor or programming editor..

B. Start the SRCBAT executable. At Windows taskbar, do the following.:

1. Click **Start**. → **Run**
2. Type **cmd** in the **Open:** text box.
3. Click **OK**.

C. A Command Window appears.

At the C:\> prompt type:

1. C:
2. Type **CD \Program Files\IBM\SMA**
3. Press **ENTER**.
4. Type **SrcBat /c <filename> /o <fully qualified outputpath>**
5. Press **ENTER**.

9.5.5.2 Batch Input Configuration File Example(s)

A. Make a command file.

B. Make a batch file. Name the file *BatchFileName*.

Example Batch File:

```
REM This is a simple batch routine to execute SRCBAT
REM
C:
CD \PROGRAM FILES\IBM\SMA
SRCBAT /c C:\BATCHPROGRAMS\DESKTOPCLONE.TXT /o C:\PROGRAM
FILES\IBM\SMA\PROFILES
```

C. At Command prompt type:

BatchFileName **ENTER**

Chapter 10. Migrating your computer profile to other computers

10.1 Overview

Migrating a computer environment

This chapter illustrates the steps necessary in enabling a migration onto a new system using SMA.

System Migration Assistant duplicates the custom-working environment of one computer to another in two phases.

- The first phase creates a list of instructions to SMA on how-to-migrate, and the settings, files, and applications to migrate.
- The second phase copies the objects and configures the target computer's operating system.

The creation of migration profile files allows for increased productivity and tangible money savings by automating the SMA process on many computers through software deployment and batch scheduling software such as IBM LCCM or by batch/script routines.

In the first phase, System Migration Assistant creates migration profiles that contain how-and-what to replicate on the target computer. To learn more about the first phase, go to Chapter 9.

This chapter deals with the second phase – the process of copying the settings, files and applications from the source computer and migrating them on the new or targets computer.

In the second phase SMA runs on the target computer and processes the migration command & data files and complete the second phase of the migration. The migration profile is the basis of any SMA migration. You will use these files to complete a migration of settings from one system to another.

This migration profile created by the first phase is the instruction guide for SMA to complete the migration process.

10.2 Concepts

10.2.1 Interactive or automated sessions

SMA can transfer the objects to migrate interactively or non-interactively.

10.2.1.1 Interactive

To have System Migration Assistant interactively prompt you to migrate custom objects you wish to the target computer, use the TARGET program. The TARGET program is a Windows-based application.

Instructions for using TARGET are in this Chapter, see page 119.

10.2.1.2 Automated

To automate System Migration Assistant, use TARBAT. Instructions for using TARBAT are in this Chapter, see section 137.

10.2.2 Registry Keys

Many of the settings that customize a computer and its applications are stored in the registry. SMA migrates and applies these sections of the registry to the TARGET computer.

System Migration Assistant applies the following Registry Keys from the source computer:

```
HKEY_LOCAL_MACHINE\SOFTWARE  
HKEY_CURRENT_USER
```

10.2.3 Type of Migration

10.2.3.1 Mass Migration

Mass Migration will copy **all** software applications from one computer to another. It will also replicate **all** Desktop & Personality Settings and Connectivity Settings to the target computer. You can copy all the files on your hard drives, or you can select which drives, folders, and/or files you wish to copy.

10.2.3.2 Selective Migration

Selective Migration allows you to choose what migrations objects to replicate on the target system. You can choose to migrate Desktop & Personality settings, Connectivity settings, and/or files to duplicate.

NOTE:

Selective Migration **does not** allow you to migrate application software. To migrate application software, you must choose the Mass Migration method of migration instead of Selective Migration. Mass Migration will replicate **all** application software on the system to clone. There is no way to selectively choose which applications to migrate.

Migrating application software both copies the application's files and integrates the application into the operating system, e.g., the Windows Registry.

Copying application software by itself without assimilating it into Windows may cause the applications to malfunction or not work at all.

10.3 Requisites

You must install an operating system on the target computer before using SMA.

You must have Windows administrator rights to use TARGET or TARBAT.

10.4 Clean up of target computer Registry

If the user has selected to not copy folders to the target computer, it is possible that the registry will contain references that refer to files that are not present on the computer.

Regclean.exe is a Microsoft product that analyses and cleans the registry.

Regclean.exe is available from Microsoft at <http://support.microsoft.com/support/downloads/dp3049.asp>

IBM does not accept any liability from your using Regclean.

10.5 Using SMA TARGET Computer Migration GUI

10.5.1 Overview

System Migration Assistant can work with you through an interactive Windows program to copy the list of user preferences and applications to the target computer.

System Migration Assistant performs the migration in two phases.

In the first phase, SMA captures the objects to migrate and writes the profile to file.

The first phase must occur before doing the second phase. First, you must use SMA to capture the work environment of a computer to clone. This process creates migration profile files that needed for input to the second phase. SMA must run on the computer to clone for the first phase of the migration.

For information on how to accomplish the first phase, refer to Chapter 9, "Using SMA to capture computer profile to migrate, page 55.

This chapter deals with the second phase. The SMA program must run on the target machine for the second phase of the migration.

In the second phase, SMA on the target computer obtains instructions on the migration from the migration profile files and from an optional command file. SMA then locates the objects and migrates them from the source computer to the target computer.

The migration profile provides the second phase a list of objects and settings to migrate. The command file provides additional instructions for SMA to perform.

10.5.2 Concepts

The Windows SMA executable to perform the second phase of the migration process is TARGET. TARGET.exe is in the SMA folder. The default folder for SMA is C:\PROGRAM FILES\IBM\SMA.

TARGET processes the migration profile files. TARGET applies settings to the target computer's Windows OS and Registry. TARGET copies the files, documents and/or application software to the target machine. TARGET will prompt you interactively for data.

TARGET requires migration profile files created by SMA migration phase 1 to operate.

Migration profile files can be created by SMA 2.0, SMA 2.1, or by IBM PerSys on OS/2.

TARGET can use migration profile files created by either SMA phase one process executable, i.e., the batch or the interactive Windows-based program.

TARGET is executable at the Windows taskbar menu, through a browser, Windows Explorer, and other methods.

10.5.3 TARGET

10.5.3.1 Canceling Out of the Program

You can stop the migration process at any time.

1. Click **Cancel** button on any screen. SMA informs you that the program will end. SMA prompts to confirm you wish to terminate the program.

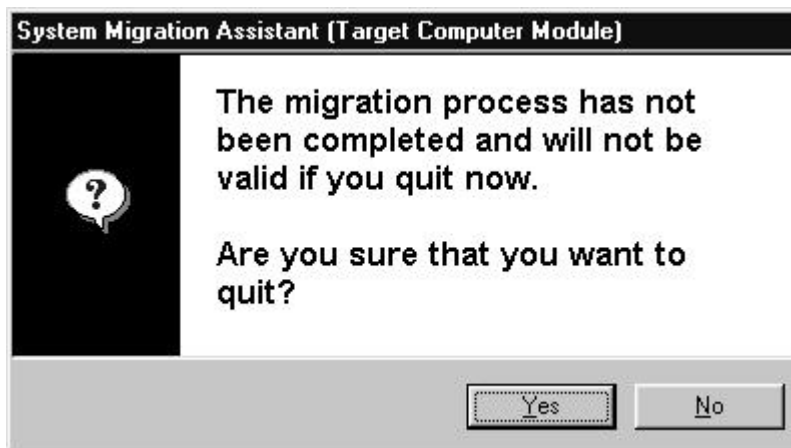


Figure 10-1 SMA validate quit

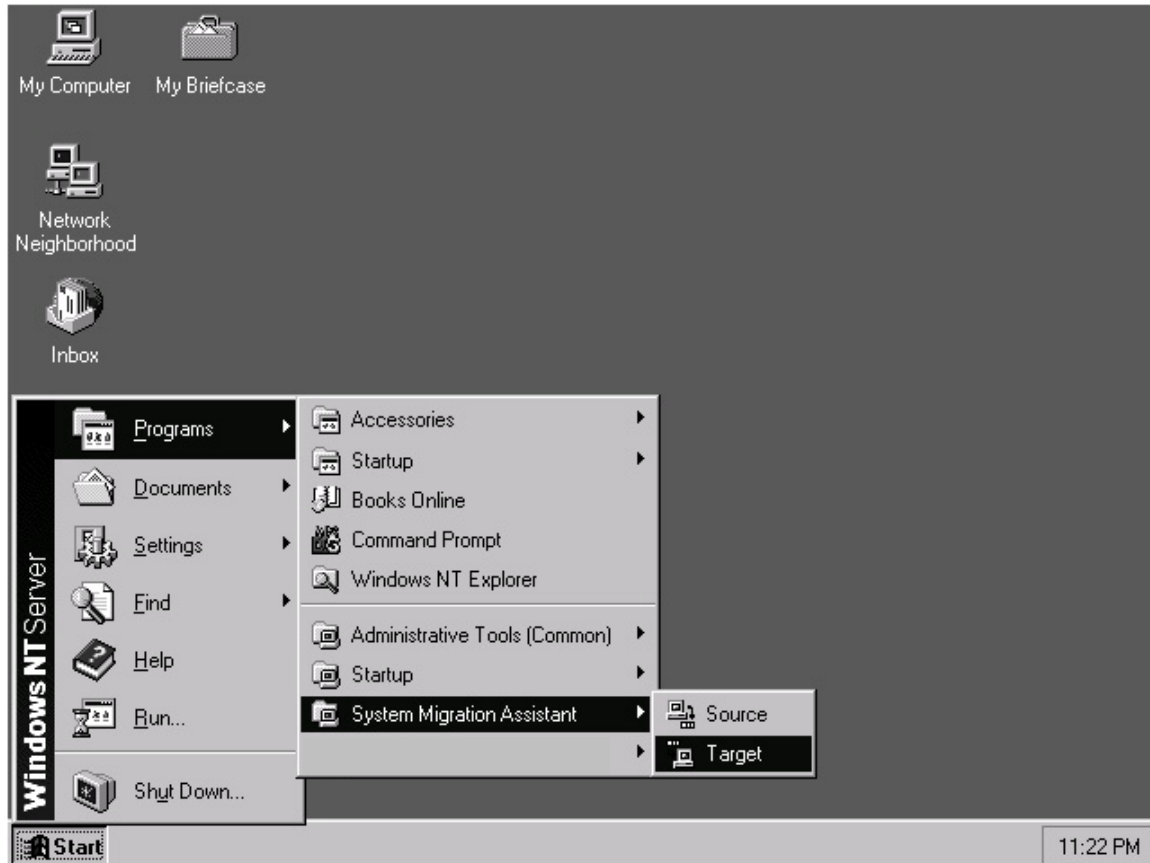
SMA will remove any output files created, and will return you to the Windows.

10.5.3.2 Using the Back key

The **Back** key appears on many screens. Click **Back** to return to previous screen(s). You can use this feature to review instructions or to change options that you selected.

10.5.3.3 Starting TARGET

You can start the SMA Windows based application (TARGET) from the Windows taskbar.



Click Windows taskbar **Start** → **Programs**→**IBM System Migration Assistant** →**TARGET**.

Windows starts System Migration Assistant.

10.5.3.4 SMA runs best when no other applications are running

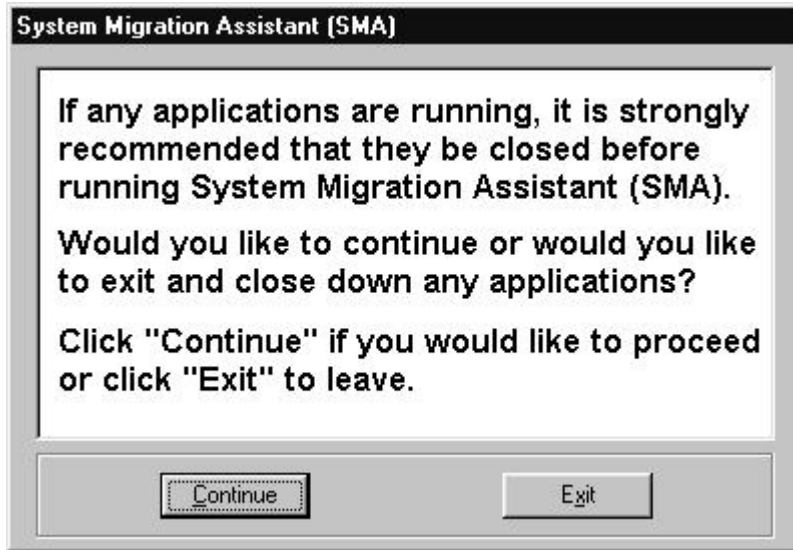


Figure 10-2 Close all applications before running SMA

System Migration will work best if no other applications are running at the same time. Close your applications. Either **Exit** or close them before you click **Continue**.

Example:

1. Close any applications
2. Click **Continue**

10.5.3.5 Main Screen

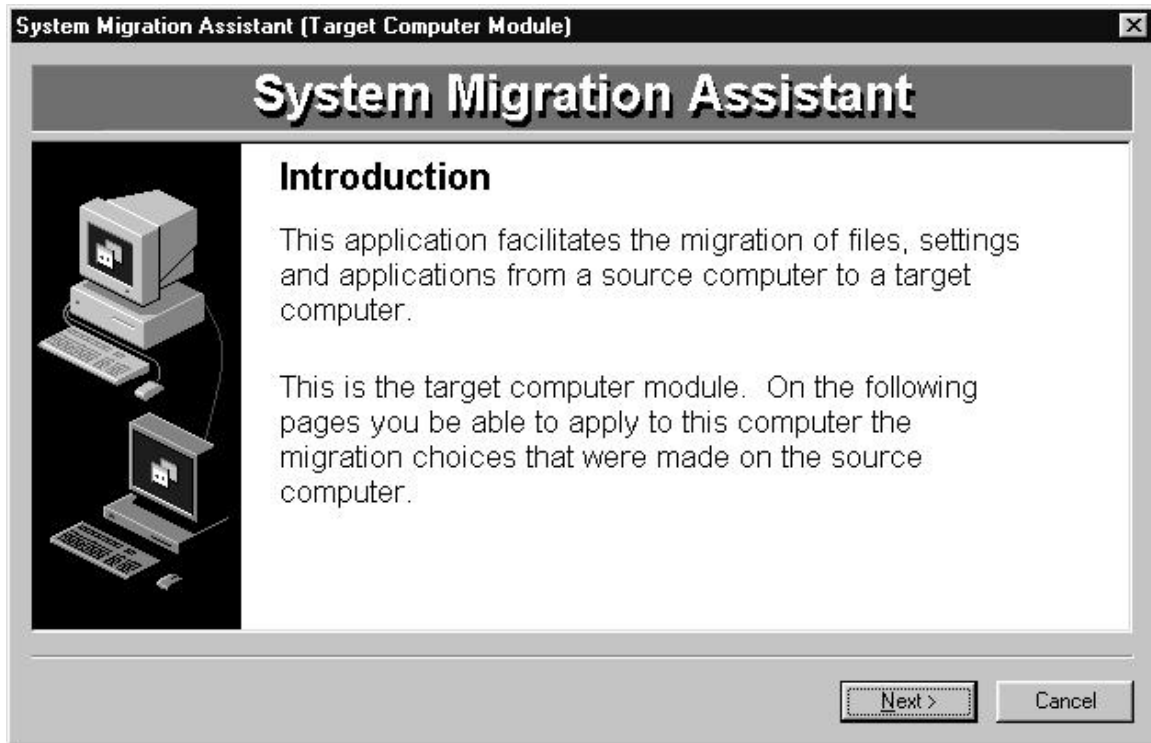


Figure 10-3 SMA TARGET introduction screen.

This is the SOURCE introduction screen. Read the information.

Click **Next** to continue to the next screen.

10.5.3.6 SMA migration profile location

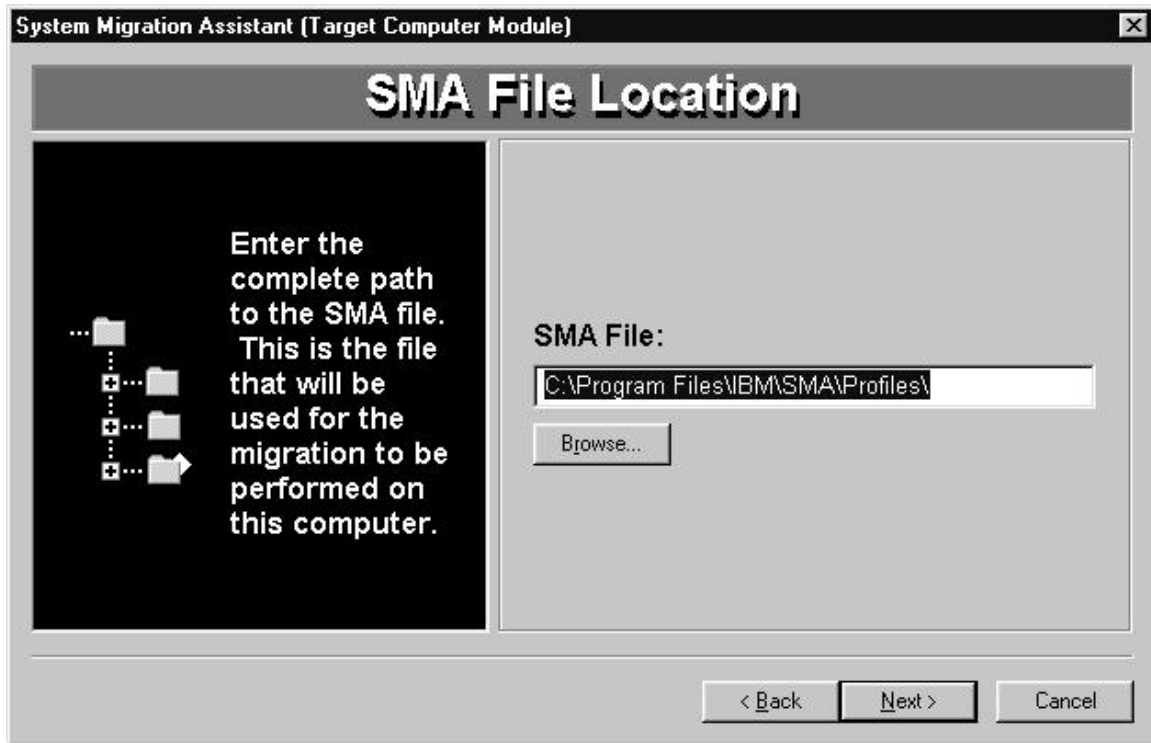
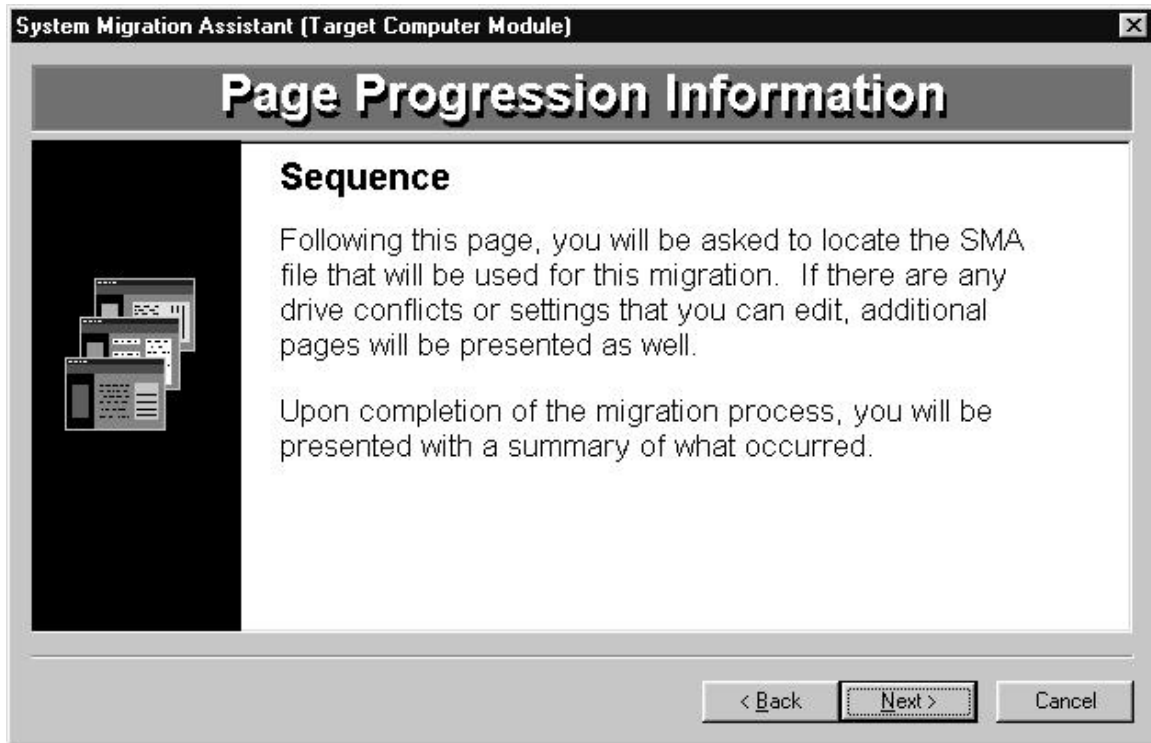


Figure 10-4 Define where SMA migration profile file pathname is.

- To select your own profile filename and location, type the profile filename and path in **SMA File:** textbox. SMA displays the default path **SMA File:** text box. **NOTE:** TARBAT does not provide a file name for you. You will have to type one in. DEFAULT.SMA is the default name that SOURCE or SRCBAT will write to.
- To select a file on your computer, click **Browse**.

Click **Next** to progress to the next screen.

10.5.3.7 Page progression information



This screen provides instructions for next screens.

Click **Next** to progress to the next screen.

10.5.3.8 SMA File information

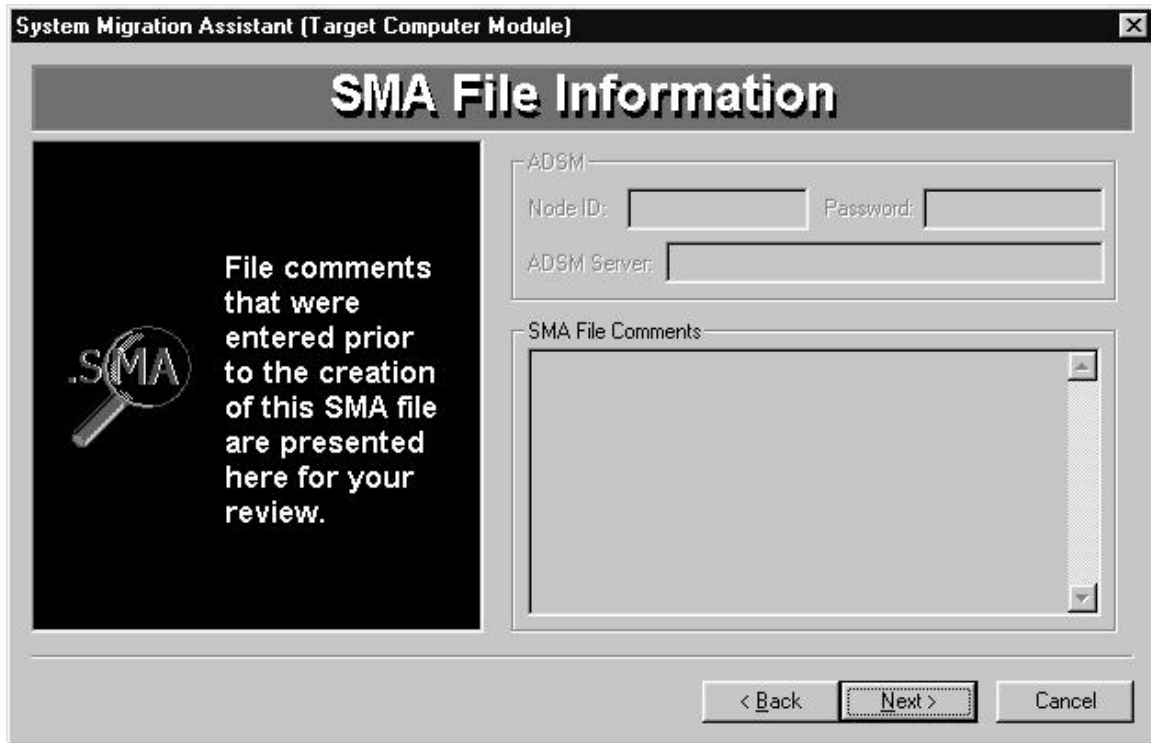


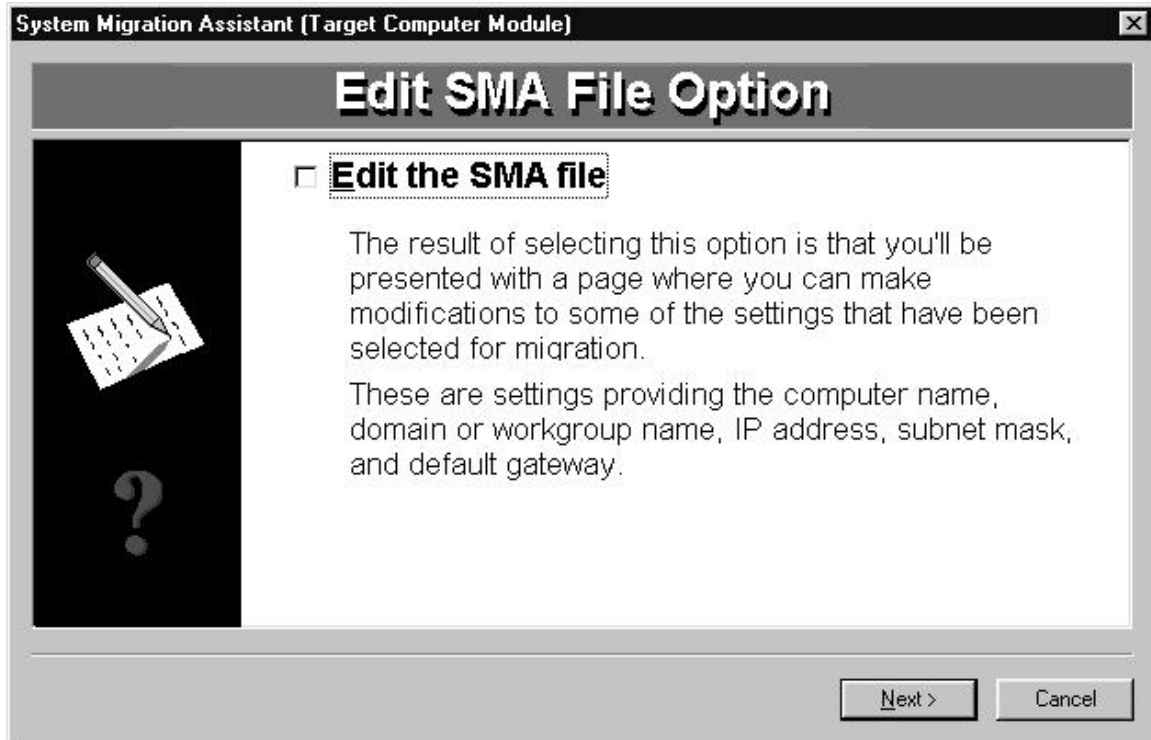
Figure 10-5 SMA migration configuration file info screen.

This screen allows you to access the profile if you saved it to TSM when you did the source computer profile.

1. Type in **TSM Node ID** your TSM user id.
2. Type in **TSM Password** your TSM password.
3. Type in **TSM Server** the name of your TSM server.
4. Click **Next** to continue to the next screen.

Review **SMA File Comments** to review instructions or comments made when making the source computer profile.

10.5.3.9 Option to edit the SMA file



This screen allows you to modify settings that have been selected for migration.

Settings to edit are:

- Network computer name
- Network domain
- Workgroup
- IP address
- Subnet mask
- Default gateway

Click **Next** if you don't want to modify the file.

Click **Edit the SMA file** to be able to edit the settings.

Click **Next**.

10.5.3.10 SMA File Edit

The screenshot shows a dialog box titled "System Migration Assistant (Target Computer Module)" with a sub-title "SMA File Edit". On the left, a black box contains a pencil icon and the text: "The edit boxes provided to the right are for changing settings. The IP Address, for example, can not be the same as another computer on the same network." On the right, there are five input fields: "Computer Name" (containing "DAVIDG"), "Domain/Workgroup" (containing "KIRKLAND"), "IP Address", "Subnet Mask", and "Default Gateway". At the bottom right, there are "Next >" and "Cancel" buttons.

This screen appears if you selected to edit the SMA file.

Change data in the edit boxes if you want. **NOTE:** The network computer name must be unique on the network. The computer TCP/IP address on the network must also be unique.

Then click **Next**.

10.5.3.11 Disk Conflict Problem

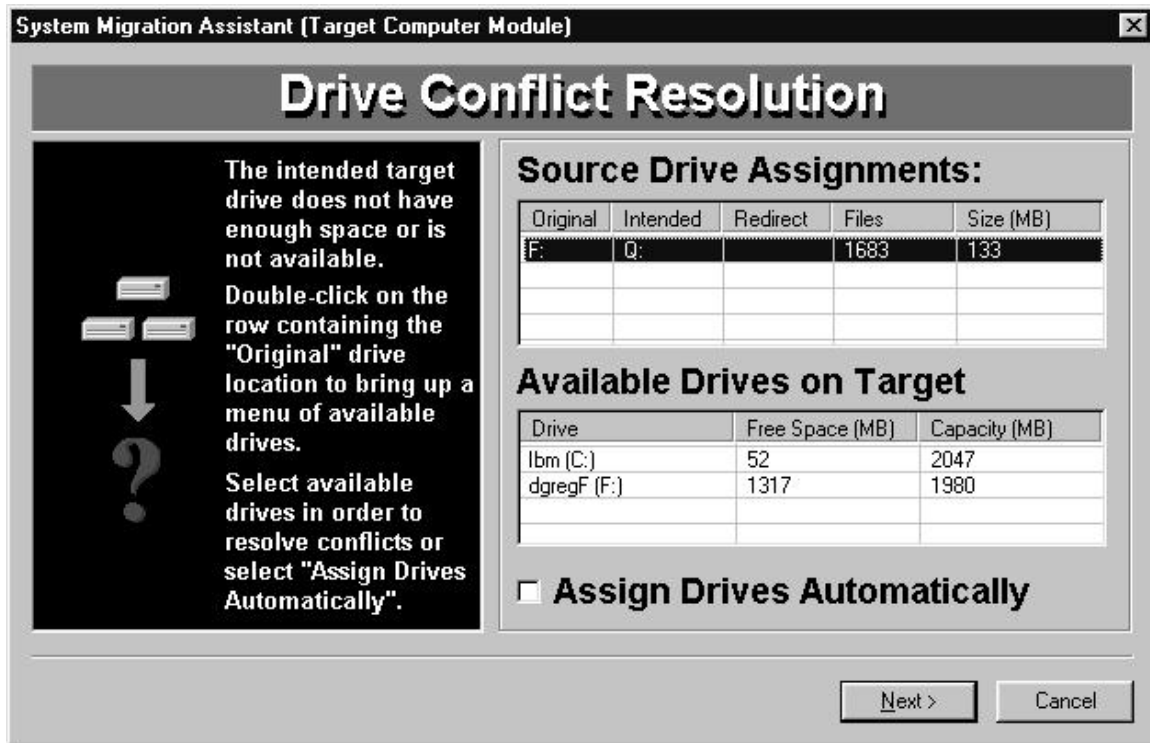


Figure 10-6 Source and Target computer drive conflict

System Migration Assistant has determined that problems exist. The disk drives you choose to migrate to either don't exist on the Target computer, or do not have enough disk space.

SMA lists the problems in the **Source Drive Assignment:**. The drive with a problem is the drive letter in the **Intended** column. You must select a new destination drive for these items.

SMA lists the **Available Drives on Target** computer.

You can select Redirect drives yourself, or you can have SMA assign new drives for you,

To determine how to solve the problem, compare the information in the **Source Drive Assignments:** list box to that in the **Available Drives on Target** list box

To resolve the problem, find a disk drive in the **Available Drives on Target** list box that has enough space on it. If there is not enough space on the drive, you must either free some, or find another drive.

The elements in the **Source Drive Assignments:** list box are:

- **Original** is the source computer's drive letter.
- **Intended** is the drive letter given for migration that has a problem.
- **Redirect** is the drive letter you will assign.
- **Files** is the number of files you selected for migration, and affected by the conflict.

- **Size** is the number of megabytes used by **Files**.

The **Available Drives on Target** list box displays disk drives and space available on the Target computer.

The **Available Drives on Target** list box column elements are:

- **Drive** is a disk drive letter on the Target Computer.
- **Free Space (MB)** is the space available on the Target Computer's disk drive.
- **Capacity** is the size of the Target Computer's disk drive.

There are two ways to obtain new drives.

A. To assign **New** drive letters yourself, do the following:

1. Double-click a **row** in the **Source Drive Assignment:** list box to change to a **Redirect** disk drive letter.
2. A menu of drives to select from appears. Left click a **drive letter**. The drive letter now appears in the **Redirect** column.
3. Continue this process until you have given all **rows** in the **Source Drive Assignment:** list box a **Redirect** drive letter.

B. To have SMA determine the new drives for you, select the **Assign Drives Automatically** check box.

Click **Finish** when you have resolved all problems.

10.5.3.12 Confirm to migrate

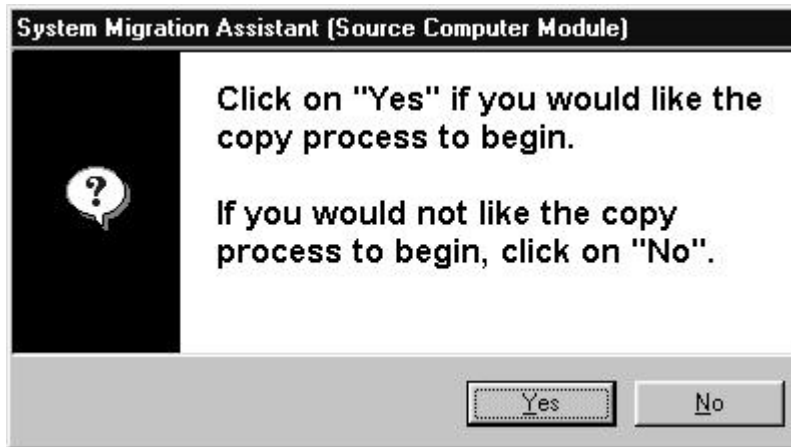


Figure 10-7 Confirm to SMA to begin migration to target computer.

SMA displays a message to verify you are ready to begin making the target computer migration.

- Click **Yes** if you want to start the migration to the target computer. SMA will then begin copying settings, files, and applications from the source computer to the target.
- Click **No** if you wish to return to the previous screen(s).

10.5.3.13 Migration In Progress



The SMA transfer process begins.

You can either:

- Click **Next** to see a report on the migration.
- Click **Cancel** to exit the program without seeing the report.

10.5.3.14 SMA Migration Summary

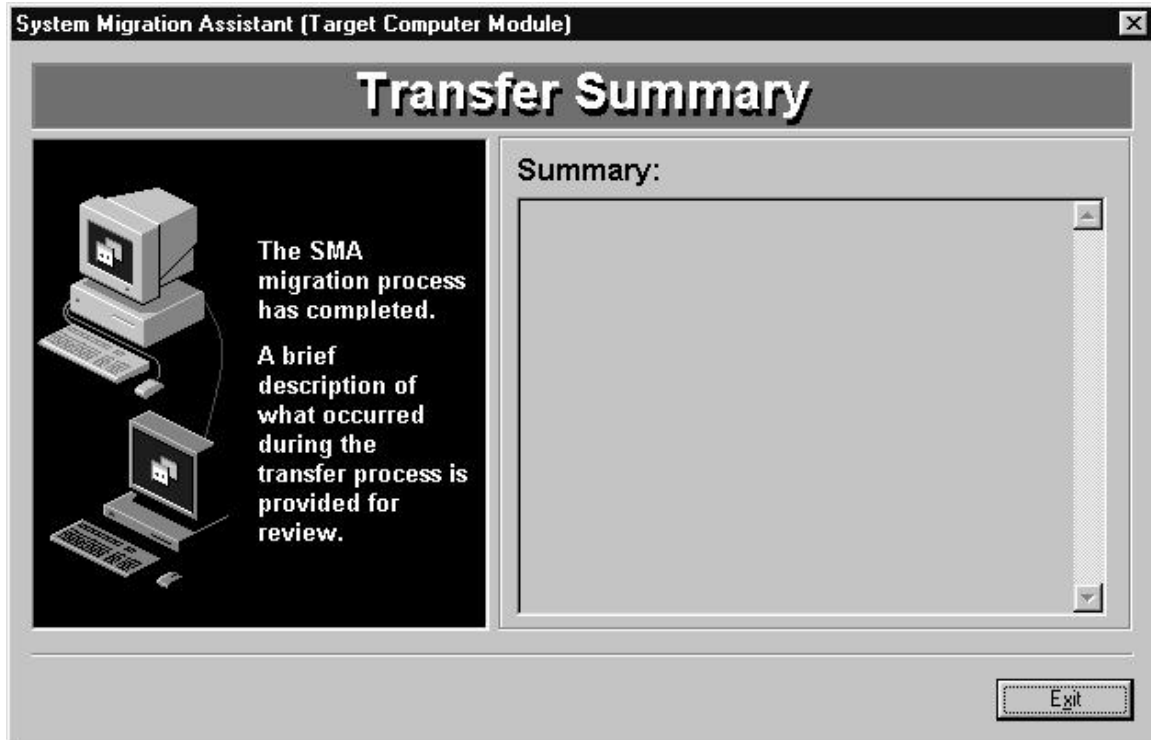


Figure 10-8 SMA - transfer finished summary screen.

SMA provides a summary report of the migration.

SMA displays a summary report of what happened during the migration.

- SMA reports on **errors** that might have occurred. In the above figure, there were no errors.
- SMA displays the **source drive** of where SOURCE was started from.
- The **Destination Drive** is the location you specified for the SMA profile.
- SMA reports the number of **Files** copied
- The migration profile file size is reported in **Bytes**.

To end the TARGET program, click **Exit**.

10.6 SMA Batch Mode – using TARBAT

10.6.1 Batch Overview

System Migration Assistant can migrate the user preferences and applications to copy to the target computer when the user is not at the work site, for example, late at night.

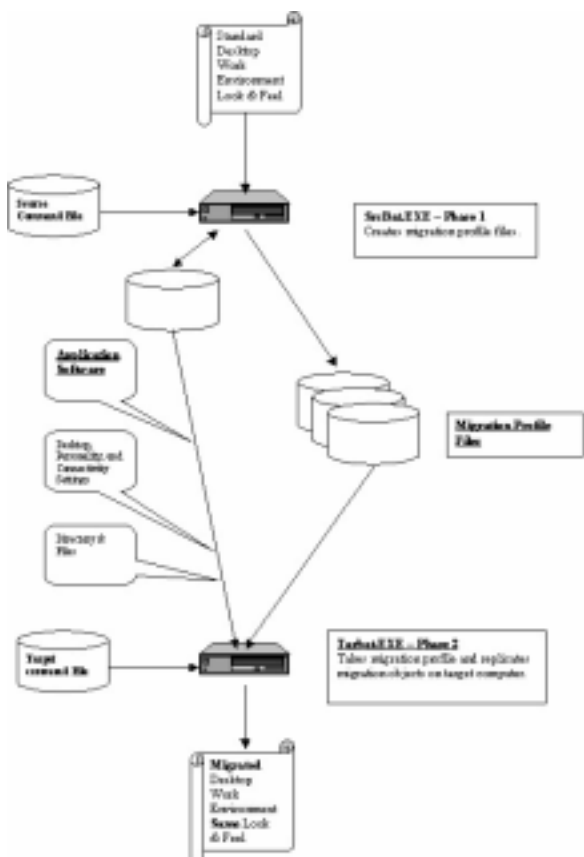
System Migration Assistant performs the migration in two phases.

In the first phase, SMA captures the objects to migrate and writes the profile to file.

The first phase must occur before doing the second phase. First, you must use SMA to capture the work environment of a computer to clone. This process creates migration profile files that needed for input to the second phase. For information on how to accomplish the first phase, refer to Chapter 9.

This chapter deals with the second phase. SMA must run on the computer to clone for the first phase of the migration. The SMA program must run on the target machine for the second phase of the migration.

In the second phase, SMA on the target computer obtains instructions on the migration from the migration profile files and from an optional command file. SMA then locates the objects and migrates them to the target computer. The migration profile provides the second phase the objects and settings to migrate. The command file provides additional instructions for SMA to perform.



10.6.2 Concepts

The SMA executable to perform the second phase of the migration process in batch mode is TARBAT. TARBAT is in the SMA folder. The default SMA folder is C:\PROGRAM FILES\IBM\SMA.

TARBAT processes the migration profile files and an optional command file. TARBAT applies settings to the target computer's Windows OS and Registry. TARBAT copies the files, documents and/or application software to the target machine. TARBAT does not prompt the user interactively for data.

TARBAT requires migration profile files created by SMA migration phase 1 to operate. Migration profile files can be created by SMA 2.0, SMA 2.1, or by IBM PerSys on OS/2. TARBAT can use migration profile files created by either SMA phase one process executable, i.e., the batch or the interactive Windows-based program.

The user can give TARBAT additional instructions by making a command file. The use of a command file is optional. The command file gives TARBAT instructions on the type of migration, and any objects to modify. TARBAT reads the command file and performs the instruction it.

TARBAT is executable at the command line prompt or automated by using batch and scripts programs. A command prompt is a Windows operating system command interpreter shell window.

Batch files, also called batch programs, contain series of operating system commands processed sequentially. A batch file can have either a CMD or BAT extension. (depending on the OS).

Scripts can execute from the Windows Desktop itself, automate tasks, and perform system operations. There are many scripting languages available, for example, Perl, and REXX

10.6.3 Requisites in applying migration profile

Before running TARBAT, you **must** have migration profile files created. SMA version 2.1 can create migration profile files with either SOURCE or SRCBAT provided with this product. You can learn more about this in Chapter 9. TARBAT can also use '.SMA' files created by SMA version 2.0 or from PerSys on OS/2. See chapter 15.

TARBAT must run from the target computer. TARBAT must run with Window's Administrator authority. Before running TARBAT, you may wish to create a command file for TARBAT.

If migrating connectivity settings, the computer name and computer TCP/IP address must be unique.

Network migrations require that all drives, folders, and/or files to be migrated must have share rights set on the source computer for you to have access those file systems. This is one reason why Administrator authority is used. If you don't use Administrator logon, all files must be set to share.

10.6.4 Working with TARBAT input command file

TARBAT receives commands on how to make a migration file from the command file. The command file provides TARBAT with information and objects to migrate. There is a template command file provided in C:\PROGRAM FILES\IBM\SMA\TARCOMMANDS.TXT

1. Make a copy of C:\PROGRAM FILES\IBM\SMA\TARCOMMANDS.TXT.
2. Edit the copy with the commands of your choice.

You can process commands from the command file. In your editor, type in the commands in the same order that it is displayed in the syntax diagrams (see Chapter 1.3.4, "Using Syntax Diagrams") on page 14 or in the examples. You can see all the TARBAT commands in Chapter 12.

10.6.5 Using TARBAT

10.6.5.1 Using TARBAT at Command Line.

TARBAT can be run from the Command line. You can operate it from the command line to do migrations, or you can test the program from there.

- A. Make a command file using your favorite word processor or programming editor..
- B. Start the TARBAT executable. At Windows taskbar, do the following.:
 4. Click **Start**. → **Run**
 5. Type **cmd** in the **Open:** text box.
 6. Click **OK**.
- C. A Command Window appears.

At the C:\> prompt type:

1. C:
2. Type **CD \Program Files\IBM\SMA**
3. Press **ENTER**.
4. Type **TARBAT /f C:\Program Files\IBM\SMA\profiles\profile.sma /c C:\Program Files\IBM\SMA\tarcommands.txt**
5. Press **ENTER**.

10.6.5.2 Batch Input Configuration File Example(s)

- D. Make a command file.
- E. Make a batch file.

Example Batch File:

```
REM This is a simple batch routine to execute TARBAT
REM
C:
CD \PROGRAM FILES\IBM\SMA
TARBAT /f C:\BATCHPROGRAMS.SMA /c C:\COMMANDFILE.TXT
FILES\IBM\SMA\PROFILES
```

F. At Command prompt type:

BatchFileName **ENTER**

Chapter 11. SRCBAT Commands

11.1 List of available SRCBAT Commands you can use

The SRCBAT commands listed in Table 5 are specifically designed for batch-file and command processing operations.

If a command can only be used for either Selective or Mass migration, that environment is indicated next to the command name. Each command description includes the purpose of the command, syntax diagram, parameters (if any), and examples of how the command is used. Related commands are provided, where appropriate.

For conceptual information on using SRCBAT, SRCBAT commands, and command files, see page 113.

You can process commands from the command file. In your editor, type in the commands in the same order as they are displayed in the syntax diagrams (see "Using Syntax Diagrams" on page 14), or in the examples.

Table 5 List of SRCBAT commands

Command Name	Description	Works with migration type
;	Allows you to place comments in the command file.	Mass, Selective
[TSM_START]	Allows you to save the profile to TSM.	Mass, Selective
[CAPTURE_NTFS_ATTRIBUTES]	Allows your file's NTFS file attributes to be migrated.	Mass, Selective
[CONNECTIVITY_START]	Lists the Connectivity <i>Objects</i> that will be migrated to the target computer.	Selective
[EXCLUSION_DRIVE_START]	Allows you to specify disk drives to migrate.	Mass
[EXCLUSION_FILE_START]	List of files that are not to be migrated to the target computer.	Mass
[EXCLUSION_FOLDER_START]	Permits you to specify folders not to migrate.	Mass
[INCLUSION_DRIVE_START]	List of disk drives to migrate.	Selective
[INCLUSION_EXTENSION_START]	List of files for SMA to migrate to Target Computer.	Mass, Selective
[INCLUSION_FILE_START]	Specifies lists of files for SMA to migrate to Target Computer.	Selective
[INCLUSION_FOLDER_START]	Specifies lists of folders for SMA to migrate to Target Computer.	Selective
[INCLUSION_EXTENSION_START]	Lists of files you want to migrate.	Selective
[OUTPUT_LOCATION]	Folder location where SMA creates migration command & data files.	Mass, Selective
[PERSONALITY_START]	Lists the Personality <i>Objects</i> that	Selective

	will be migrated to the target computer.	
[PROFILE_NAME]	Sets the Profile file filename.	Mass, Selective
[REGISTRY_START]	List of Windows registry keys you can migrate.	Selective
[SELECTIVE_EXCLUSION_FILE_START]	List of files that are not to be migrated to the target computer. Overrides what is in the "Inclusion" sections.	Selective
[SELECTIVE_EXCLUSION_FOLDER_START]	List of folders that are not to be migrated to the target computer. Overrides what is in the "Inclusion" sections.	Selective
[TRANSFER_MODE]	Determines what type of migration will occur, mass or selective.	Mass, Selective
[USER_EXIT]	User selected – command file to execute upon completion of writing migration files to disk.	Mass, Selective

The following are **required** when building a SRCBAT command file:

- [OUTPUT_LOCATION], unless specified on the command line or [TSM_START] is used instead.
- [TRANSFERMODE] It must appear in the file before the Exclude or Include entries.

If the following commands are **missing** from the SRCBAT command file:

SMA Command	SMA Action
[PERSONALITY_START]	Default selection is used. (Selective only)
[CONNECTIVITY_START]	Default selection is used. (Selective only)
[EXCLUSION_FILE_START] [EXCLUSION_FOLDER_START] [EXCLUSION_DRIVE_START]	All drives, folders, and files are included. (Mass only)
[INCLUSION_EXTENSION_START]	No files selected by extension group. (Selective only)
[INCLUSION_FOLDER_START]	No files selected. (Selective only)

11.2; - COMMENTS

;- COMMENTS

The semi-colon ';' permits you to include comments in your 'command' file. Any characters on the line after the semi-colon ';' are ignored by SRCBAT.

You can add comments to your macro file to document its purpose and functions.

To write a comment, write a ; (semi-colon) to indicate the beginning of the comment, and then write the comment. You must put a comment on a line by itself.

You cannot nest comments and comments cannot span lines.

Syntax Diagram

```
>>-;-----+-----+-----<<
          |_comment_|
```

Parameters

comment

Specifies any string of characters you want to include as a comment.

Example

To place this comment THIS IS A SRCBAT FILE in a command file, type:

```
;- THIS IS A SRCBAT COMMAND FILE
```

```
; This command profile is the transfer settings for the Accounting Dept. Base setup machine.
;
```

11.3 [TSM_START]

[TSM_START] [TSM_END]

This command allows you to save your migration profile to TSM. [TSM_START] and [TSM_END] must be present, with parameters required listed between. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

```
>>--[TSM_START]----->
>---USING_TSM---=-----+ 0+ ----->
                        | 1 |
>---NODEID-----=-----UserId----->
>---PASSWORD-----=-----TSMPassword----->
>---TSM_SERVER---=-----ServerName----->
>---[TSM_END]-----<---
```

Parameters

<i>0</i>	Don't use TSM.
<i>1</i>	Use TSM.
<i>UserId</i>	This is the TSM user id you have.
<i>TSMPassword</i>	The password you use to logon to TSM.
<i>ServerName</i>	This is the name of the TSM server you belong to.

Example

This example sets USING_TSM to use the TSM product to store the profile by using *1*. The user has TSM User id named *testid*. Their password is *xxxx*. The *portland* TSM server has the *testid* user.

```
[TRANSFER_MODE]
TRANSFERMODE=selective
[TSM_START]
USING_TSM=1
NODEID=testid
PASSWORD=xxxx
TSM_SERVER=portland
```


[TSM_END]

11.4 [CAPTURE_NTFS_ATTRIBUTES]

[CAPTURE_NTFS_ATTRIBUTES] CAPTURE_NTFS_ATTRIBUTES=

[CAPTURE_NTFS_ATTRIBUTES] allows you to transfer your file's NTFS file attributes. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

```
>>--[CAPTURE_NTFS_ATTRIBUTES]----->  
  
>---CAPTURE_NTFS_ATTRIBUTES-----=-----+0+----->  
                                         | I |
```

Parameters

- 0 Don't migrate NTFS attributes.
- 1 Transfers NTFS attributes.

Remarks

The process of capturing NTFS attributes takes significantly more time.

Example

In this example NTFS attributes are not desired, so CAPTURE_NTFS_ATTRIBUTES= is set to 0.

```
CAPTURE_NTFS_ATTRIBUTES  
CAPTURE_NTFS_ATTRIBUTES=0
```

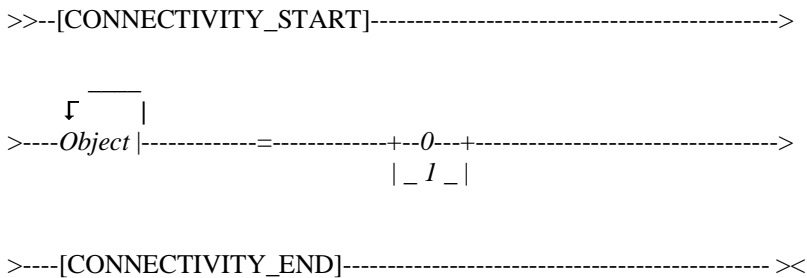
11.5 [CONNECTIVITY_START]

[CONNECTIVITY_START]

[CONNECTIVITY_END]

Determines the Connectivity *Objects* that will be migrated to the target computer. [CONNECTIVITY_START] and [CONNECTIVITY_END] must be present, with parameters listed between.

Syntax Diagram



Parameters

Object Specifies which Connectivity *Object* is to be set. *Object* must be one of the following values:

- computerdescription
- computername
- dnsconfiguration
- mappeddrives
- rasnetworking
- sharedfolders
- tcpipconfiguration
- winsconfiguration
- workgroup
- domain

0 Specifies the *Object* is not to be migrated.

1 Specifies the *Object* is to be migrated.

Remarks

This command only works with the [TRANSFER_MODE] set as Selective.

Example

The following example copies only **mappeddrives** and **sharedfolders** objects.

```
[TRANSFER_MODE]
[TRANSFERMODE=selective
[CONNECTIVITY_START]
computerdescription=0
computername=0
dnsconfiguration=0
mappeddrives=1
rasnetworking=0
sharedfolders=1
tcpipconfiguration=0
winsconfiguration=0
workgroup=0
domain=0
[CONNECTIVITY_END]
```

11.6 [EXCLUSION_DRIVE_START]

[EXCLUSION_DRIVE_START] [EXCLUSION_DRIVE_END]

This command only works with Mass Migrations. This command will not transfer the disk drive to the target computer. [EXCLUSION_DRIVE_START] and [EXCLUSION_DRIVE_END] must be present, with drives to profile between.

Syntax Diagram

```
>>--[EXCLUSION_DRIVE_START]----->  
┌──────────┐  
>---Disk Drives |----->  
  
>---[EXCLUSION_DRIVE_END]-----<
```

Parameters

Disk Drives Specifies which disk drive not to migrate.

Remarks

If you use this command you must also set the [TRANSFER_MODE] command as a mass migration.

Example

To exclude the C:, E:, and F: drives from a migration, add the following to the command file:

```
[TRANSFER_MODE]  
TRANSFERMODE=SELECTIVE  
[EXCLUSION_DRIVE_START]  
C:  
E:  
F:  
[EXCLUDED_DRIVE_END]
```


11.8 [EXCLUSION_FOLDER_START]

[EXCLUSION_FOLDER_START] [EXCLUSION_FOLDER_END]

This command only works with Mass Migrations. It excludes file folders that are not to be migrated to the target computer. [EXCLUSION_FOLDER_START] and [EXCLUSION_FOLDER_END] must be present, with folders to exclude listed between.

Syntax Diagram

```
>>---[EXCLUSION_FOLDER_START]----->
```

```
  ┌───┐  
  ↓   |  
>---Folder|----->
```

```
>---[EXCLUSION_FOLDER_END]-----<
```

Parameters

Folder Specifies a file name or pathname which SMA will not migrate. *Folder* consists of the drive letter with a colon and backslash, pathname, or a combination. The folder must be on a fixed drive on the source computer.

Remarks

If you use this command you must set the [TRANSFER_MODE] command to be a mass migration.

Example

To exclude the C:\WINDOWS, C:\TEMP, and C:\PROGRAM FILES folders from the migration, add the following to the command file:

```
[TRANSFER_MODE]  
TRANSFERMODE=mass  
[EXCLUSION_FOLDER_START]  
C:\WINDOWS  
C:\TEMP  
C:\PROGRAM FILES  
[EXCLUSION_FOLDER_END]
```


11.11 [INCLUSION_FILE_START]

[INCLUSION_FILE_START]

[INCLUSION_FILE_END]

This command only works with Mass Migrations. This command provides SRCBAT with list names of folders to migrate to the target computer. [INCLUSION_FILE_START] and [INCLUSION_FILE_END] must be present, with parameters listed between.

Syntax Diagram

>>---[INCLUSION_FILE_START]----->

↓
>---*Filename* |----->

>---[INCLUSION_FILE_END]-----<<

Parameters

Filename Specifies filenames for SMA to migrate. *Filename* can be a local or network drive. *Filename* consists of the drive letter with a colon and backslash, pathname, a filename, or a combination.

Example

To give SRCBAT a list of files to copy to target computer, add this to your command file like this example:

```
[INCLUSION_FILE_START]
C:\PROGRAM01.EXE
C:\DEVELOPMENT\PLANS\DATAFILE01.DAT
F:\DEVELOPMENT\BUILD\PROGRAM02.EXE
F:\DEVELOPMENT\SOURCE\SOURCEFILE0.CPP
[INCLUSION_FILE_END]
```

11.12 [INCLUSION_FOLDER_START]

[INCLUSION_FOLDER_START] [INCLUSION_FOLDER_END]

[INCLUSION_FOLDER_START] only works on Selective Migrations. This command allows you to give SRCBAT a list of folders to migrate to the target computer. Every file with those *FileExtensions* will be copied. The [INCLUSUION_FOLDER_START] and [INCLUSUION_FOLDER_END] must be present, with parameters listed between.

Syntax Diagram

```
>>---[INCLUSION_FOLDER_START]----->>  
  
  ┌───┐  
  ↓   |  
>---Folder |----->  
  
>---[INCLUSION_FOLDER_END]-----<<
```

Parameters

Folder Specifies folder for SMA to migrate to Target Computer. *Folder* must be on a local fixed drive on the source computer..

Example:

```
[INCLUSION_FOLDER_START]  
C:\IMPORTANT  
[INCLUSION_FOLDER_END]
```

11.13 [OUTPUT_LOCATION]

[OUTPUT_LOCATION] OUTPUT_LOCATION=

Specifies folder where SMA is to create migration profile files. Make sure the folder exists. [OUTPUT_LOCATION] specifies the beginning of the command. OUTPUT_LOCATION= must follow on the next line. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

```
>>---[OUTPUT_LOCATION]----->
>---OUTPUT_LOCATION-----+--path--+-----<
                           |_ drive _|
```

Parameters

drive, path Specifies the drive and folder location for SMA migration profile files. The destination folder can be a local or network drive.

Remarks

SRCBAT **ignores** this Migration Resource command if the user specifies the output location on the command line. If you use the [TSM_START] command, SRCBAT will also ignore this command.

Example

To place the migration profile files in the C:\SMA\ACCOUNTING GROUP\PROFILES folder type:

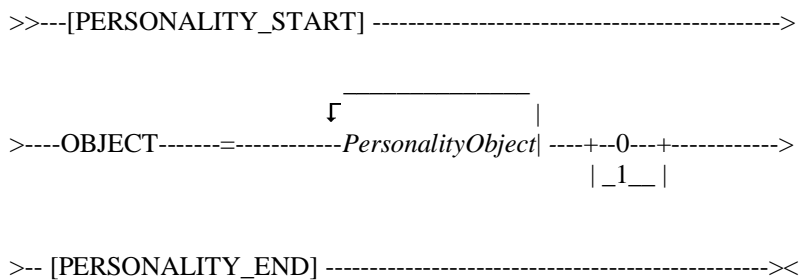
```
[OUTPUT_LOCATION]
OUTPUT_LOCATION=C:\SMA\ACCOUNTING GROUP\PROFILES
```

11.14 [PERSONALITY_START]

[PERSONALITY_START] [PERSONALITY_END]

This command can only be used on selective migrations. It determines the Personality objects that will be migrated to the target computer. [PERSONALITY_START] and [PERSONALITY_END] must be present, with parameters listed between.

Syntax Diagram



Parameters

PersonalityObject Specifies which Personality *Object* is to be set. Do not include any blanks immediately before or after the equal sign (=). *Object* must be one of the following values:

- accessibility
- activedesktop
- colors
- desktopicons
- display
- iconmetrics
- internetbrowser
- keyboard
- mouse
- pattern
- printers
- screensaver
- sendtomenu
- shell
- sound
- startmenu
- taskbar
- userprofiles
- wallpaper
- windowmetrics

- 0 Not to be migrated.
1 To be migrated.

Example

The following is an example of selecting only desktop items. Type the example in a command file.

```
[PERSONALITY_START]
accessibility=0
activedesktop=0
colors=1
desktopicons=1
display=1
iconmetrics=1
internetbrowser=0
keyboard=0
mouse=1
pattern=1
printers=0
screensaver=1
sendtomenu=1
shell=0
sound=0
startmenu=1
taskbar=1
userprofiles=0
wallpaper=1
windowmetrics=1
[PERSONALITY_END]
```

11.15 [REGISTRY_START]

[REGISTRY_START] [REGISTRY_END]

This command only works with Selective Migrations. This command will transfer registry keys. [REGISTRY_START] and [REGISTRY_END] must be present, with registry keys listed between.

Syntax Diagram

```
>>---[REGISTRY_START]----->>  
  
┌───  
└───  
>---RegistryKey |----->  
  
>---[REGISTRY_END]-----<<
```

Parameters

RegistryKey Specifies a Windows registry key to which SMA will migrate.

ATTENTION: The migration of registry keys can lead to unpredictable behavior to your computer system. Exercise EXTREME caution and careful considerations before adding any registry keys to this migration list.

Remarks

If you use this command you must also use the [TRANSFER_MODE] command and set it to selective migration.

Example

To include the following keys:

```
HKEY_LOCAL_MACHINE\SOFTWARE\IBM\SMA\2.1  
HKEY_LOCAL_MACHINE\SOFTWARE\TSM
```

and the following value:

HKLM\SOFTWARE\MICROSOFT\OFFICE\8.0\EXCEL\VALUE1 to a migration, add the following to the command file:

```
[TRANSFER_MODE]  
TRANSFERMODE=selective  
[REGISTRY_START]  
HKLM,"SOFTWARE\IBM\SMA\2.1"  
HKLM,"SOFTWARE\TSM"  
HKLM,"SOFTWARE\MICROSOFT\OFFICE\8.0\EXCEL",VALUE1  
[REGISTRY_END]
```

11.16[SELECTIVE_EXCLUSION_FILE_START]

[SELECTIVE_EXCLUSION_FILE_START] [SELECTIVE_EXCLUSION_FILE_END]

This command only works with Selective Migrations. This command will not transfer the files listed to the target computer. [SELECTIVE_EXCLUSION_FILE_START] and [SELECTIVE_EXCLUSION_FILE_END] must be present, with files to exclude between.

Syntax Diagram

```
>>---[ SELECTIVE_EXCLUSION_FILE_START] ----->
      |
      |   _____ |
      |   |           |
>>---Filename |----->
      |
      |
>>--- [SELECTIVE_EXCLUSION_FILE_END] -----<<
```

Parameters

Filename Specifies which files not to migrate.

Remarks

If you use this command, you must also use the [TRANSFER_MODE] command set to selective migration.

Example

To exclude the files MY_DOCUMENT01.DOC, MY_DOCUMENT02.DOC, and PROGRAM01.EXE from a migration, add the following to the command file:

```
[TRANSFER_MODE]
TRANSFERMODE=selective
[SELECTIVE_EXCLUSION_FILE_START]
C:\DOCUMENTS\MY_DOCUMENT01.DOC
C:\DOCUMENTS\MY_DOCUMENT02.DOC
C:\PROGRAMS\PROGRAM01.EXE
[SELECTIVE_EXCLUDED_FILE_END]
```

11.17 [SELECTIVE_EXCLUSION_FOLDER_START]

[SELECTIVE_EXCLUSION_FOLDER_START] [SELECTIVE_EXCLUSION_FOLDER_END]

This command only works with Selective Migrations. It excludes file folders that are not to be migrated to the target computer. [SELECTIVE_EXCLUSION_FOLDER_START] and [SELECTIVE_EXCLUSION_FOLDER_END] must be present, with folders to exclude listed between.

Syntax Diagram

```
>>---[SELECTIVE_EXCLUSION_FOLDER_START]----->
```

```
  ↓ _____ |  
>---Folder|----->
```

```
>---[SELECTIVE_EXCLUSION_FOLDER_END]-----<
```

Parameters

Folder Specifies a file name or pathname which SMA will not migrate. *Folder* consists of the drive letter with a colon and backslash, pathname, or a combination. The folder must be on a fixed drive on the source computer.

Remarks

If you use this command you must set the [TRANSFER_MODE] command to be a selective migration.

Example

To exclude the C:\WINDOWS, C:\TEMP, and C:\PROGRAM FILES folders from the migration, add the following to the command file:

```
[TRANSFER_MODE]  
TRANSFERMODE=selective  
[SELECTIVE_EXCLUSION_FOLDER_START]  
C:\WINDOWS  
C:\TEMP  
C:\PROGRAM FILES  
[SELECTIVE_EXCLUSION_FOLDER_END]
```


11.18 [TRANSFER_MODE]

[TRANSFER_MODE] TRANSFERMODE=

Determines what type of migration SRCBAT will use. [TRANSFER_MODE] specifies the beginning of the command. TRANSFERMODE= must follow on the next line. In this example, you must choose TRANSFERMODE=SELECTIVE or TRANSFERMODE=MASS. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

```
>>---[TRANSFER_MODE]----->
>---TRANSFERMODE-----=-----+---SELECTIVE+-----<<
                               |_ MASS _____|
```

Parameters

<i>SELECTIVE</i>	Makes the migration a Selective migration.
<i>MASS</i>	Makes the migration a Mass migration.

Remarks

The [TRANSFER_MODE] command is **mandatory** in a command file.

Example

To have a *Selective* migration type the following in the command file:

```
[TRANSFER_MODE]
TRANSFERMODE=SELECTIVE
```

11.19 [USER_EXIT]

[USER_EXIT]

USEREXIT=

User selected command file to execute upon writing migration files to disk. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

```
>>---[USER_EXIT]----->
>-----USEREXIT-----=-----filename-----<
```

Parameters

Filename The fully qualified name of a executable file that is executed at the end of processing. Do not include any blanks immediately before or after the equal sign (=).

Example

To execute a batch process called SRCUSER.COMD at the end of SRCBAT execution, type the following in a command file:

```
[USER_EXIT]
USEREXIT=SRCUSER.COMD
```

Chapter 12. TARBAT Commands

12.1 List of available TARBAT commands

All TARBAT commands can be used with selective or mass migrations.

Table 6 List of TARBAT commands

Command Name	Purpose
[TSM_START]	Used to provide TSM user id, password, and server.
[COMPUTER_NAME]	Allows you to give target computer a unique network name.
[DOMAIN_ WORKGROUP]	Sets the network domain or workgroup name that the target machine will belong to.
[GATEWAY]	Allows you to provide the TCP/IP gateway name.
[SUBNET]	This command assigns the subnet mask for the target computer.
[TCPIP]	Gives target computer unique TCP/IP address.
[USER_EXIT]	Command file program executed upon completion of TARBAT

12.2 [TSM_START]

[TSM_START]

[TSM_END]

This command allows you to read your migration profile saved on TSM. You provide the information necessary for SRCBAT to logon to TSM. [TSM_START] and [TSM_END] must be present, with parameters required listed between. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

```
>>--[TSM_START]----->
>---USING_TSM---=-----+0+----->
                        | 1 |
>---NODEID-----=-----UserId----->
>---PASSWORD-----=-----TSMPassword----->
>---TSM_SERVER---=-----ServerName----->
>---[TSM_END]-----<<
```

Parameters

0 Don't use TSM.

1 Use TSM.

UserId This is the TSM user id you have.

TSMPassword The password you use to logon to TSM.

ServerName This is the name of the TSM server you belong to.

Example

This example saves the SMA profile information to the TSM server. The user has TSM User id named testid. Their password is xxxx. portland is the name of the TSM server.

```
[TRANSFER_MODE]
TRANSFERMODE=selective
;
[TSM_START]
```

```
USING_TSM=1
NODEID=testid
PASSWORD=xxxx
TSM_SERVER=portland
[TSM_END]
```

12.3 [COMPUTER_NAME]

[COMPUTER_NAME]
COMPUTER_NAME=

Sets the unique network computer name for the target computer. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

```
>>---[COMPUTER_NAME]----->  
>-----COMPUTER_NAME -----=-----NetworkComputerName-----<
```

Parameters

NetworkComputerName The network computer name for the target computer.

Remarks

The computer name you give must be unique. There cannot be two computers with the same name.

Example

The following example sets the new computer to Accounting_Employee01.

```
[COMPUTER_NAME]  
COMPUTER_NAME=Accounting_Employee01
```

12.4 [DOMAIN_WORKGROUP]

[DOMAIN_WORKGROUP] DOMAIN_WORKGROUP=

Sets the name of the network domain or workgroup that the target computer will belong to. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

>>----[DOMAIN_WORKGROUP]----->

>----DOMAIN_WORKGROUP-----=-----*Name*-----<

Parameters

Name The network that the target computer belongs to.

Example

In the following example, the name of the domain is set to `SeattleReportingGroup`.

```
[DOMAIN_WORKGROUP]  
DOMAIN_WORKGROUP=SeattleReportingGroup
```

12.5[GATEWAY]

[GATEWAY]

GATEWAY=

This sets the name of the gateway used by the target computer. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

>>---[GATEWAY]----->

>-----GATEWAY-----=-----Gateway-----<<

Parameters

Gateway The TCP/IP address of the gateway the target computer will use.

Example

This example sets the name of the gateway on the target computer to 122.55.85.1.

[GATEWAY]

GATEWAY=122.55.85.1

12.6 [SUBNET]

[SUBNET] SUBNET=

This command assigns the subnet mask for the target computer. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

>>---[SUBNET]----->

>-----SUBNET-----=-----*SubnetMask*-----<<

Parameters

SubnetMask The TCP/IP subnet mask for the target computer.

Example

You can set the following subnet mask to 255 . 255 . 255 . 0 by typing the following into your TARBAT Command File.

```
[SUBNET]  
SUBNET=255.255.255.0
```

12.7 [TCPIP]

[TCPIP]

NEW_VALUE=

This command assigns a unique TCP/IP address for the target computer. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

```
>>---[TCPIP]-----<<
```

```
>---NEW_VALUE-----=-----NetworkTcpipAddress-----<
```

Parameters

NetworkTcpipAddress Unique static TCP/IP address for the target computer.

Remarks

Each TCP/IP address must be unique. You cannot have two devices have the same TCP/IP address on a network.

Example

You can set the following TCP/IP address by typing the following into the TARBAT Command File.

```
[TCPIP]  
NEW_VALUE=122.55.85.30
```

12.8 [USER_EXIT]

[USER_EXIT]

USEREXIT=

User selected command file to execute upon writing migration files to disk. Do not include any blanks immediately before or after the equal sign (=).

Syntax Diagram

>>---[USER_EXIT]----->

>---USEREXIT-----=----- *Filename*-----<

Parameters

Filename The fully qualified name of a executable file that is executed at the end of processing. Do not include any blanks immediately before or after the equal sign (=).

Example

To execute a batch process called TARUSER.CMD at the end of TARBAT execution, type the following in a command file.

```
[User_Exit]
UserExit=TARUSER.CMD
```

Chapter 13. SRCBAT program syntax

SRCBAT

SRCBAT creates a migration profile of the source computer to apply to a target computer consisting of the following files:

- DEFAULT.SMA
- DEFAULT.PRC
- DEFAULT.F01

The profile may consist of personality settings, connectivity Settings, files to migrate, application software, and/or registry keys. SRCBAT receives instructions on what, where, and how to create a migration profiles from a command file, and then creates the profile files.

After SRCBAT creates the profile files, you must use either TARBAT or TARGET programs on the target computer to apply.

Returns

- 0 No errors occurred.
<> 0 Problems occurred.

Syntax Diagram

>>---SRCBAT-----/c-----*CommandFile*----->

>---+-----+-----+-----+-----><
 '-- /o--' '---*OutputFilesPathname*---

Parameters

- /c* Flag that indicates there is a command file.
- CommandFile* The filename of the command file to SRCBAT. The text file contains commands on how-and-what should be migrated.
- /o* Flag that indicates there is an output pathname to use.
- OutputFilesPathname* The folder where the profile is to be located. If no folder name is given, the default is C:\PROGRAM FILES\IBM\SMA\PROFILES.

Remarks

The use of a command file is mandatory.

Do not edit SMA migration files, they **cannot** be altered.

Example:

This example does the following:

1. Changes from the F: drive to the C: drive.
2. Changes the current folder to \PROGRAM FILES\IBM\SMA. This is the folder where SRCBAT is located.
3. Executes SRCBAT with C:\BATCH\DESKTOPCLONE.TXT as the command file that provides instructions to SRCBAT. The pathname C:\PROGRAM FILES\SMA\PROFILES is the location to write the migration files to.

F:\> C:

C:\> CD \PROGRAM FILES\SMA

C:\>SRCBAT /c C:\BATCH\DESKTOPCLONE.TXT /o C:\PROGRAM FILES\SMA\PROFILES

Chapter 14. TARBAT Program Syntax

TARBAT

TARBAT applies the source computer's profile to the target computer. The profile is placed in files having migration information on what, where, and how to apply the migration to the target computer.

You must create a migration profile of the source computer before you use TARBAT. To create a migration profile, use the SRCBAT or SOURCE programs.

TARBAT reads the source computer profile file. TARBAT then replicates the profile on the target computer by copying personality settings, connectivity settings, application software, registry keys, and/or files from the source computer. TARBAT must be run on the target computer. You can use a command file to adjust additional settings and instructions.

TARBAT uses the following migration profile files produced by SMA:

- DEFAULT.SMA
- DEFAULT.PRC
- DEFAULT.F01

Syntax Diagram

>>--TARBAT--/f-----*SmaProfile*-----.SMA-----<

```

>---+-----+-----+-----+----->
    |-----|-----|-----|
    |-- /c--          |-- CommandFile |--
  
```

Parameters

/f	Flag that precedes the pathname of <i>SmaProfile</i> . Note: /f is required.
<i>SmaProfile</i>	The filename of the profile file with a file extension of .SMA. <i>SmaProfile</i> is a file created either by SMA 2.0, SMA 2.1, or by PerSys on OS/2. Note: <i>SmaProfile</i> is required.
/c	Flag precedes the filename of a TARBAT command file.
<i>Commandfile</i>	The filename of the TARBAT command file. The command file is a text file that contains migration instructions to TARBAT. Note: <i>Commandfile</i> is optional.

Remarks

Don't edit SMA output migration profile files, the files have special characters in them.

Returns:

0 No errors
<>0 Problems occurred.

Example

This example does the following:

1. Changes from the F : drive to the C : drive.
2. Changes the current folder to \PROGRAM FILES\IBM\SMA. This is the folder where TARBAT is located.
3. Executes TARBAT with C : \BATCHPROGRAMS\APPLYMIGRATION .TXT as the command file. The pathname C : \PROGRAM FILES\SMA\PROFILES is the location the source computer profile file. Note the source computer profile file has already been copied from source to target computer.

F:\> C:

C:\> CD \PROGRAM FILES\SMA

**C:\> TARBAT /f C:\PROGRAM FILES\SMA\PROFILES /c
C:\BATCHPROGRAMS\APPLYMIGRATION.TXT**

Chapter 15. Migrating OS/2 computer profiles to Windows PC's

15.1 Summary

OS/2 users who are migrating to Microsoft Windows operating systems can migrate some OS/2 settings using System Migration Assistant.

System Migration Assistant does not run on OS/2. You can use another IBM product on OS/2 to obtain the settings named Persys.

IBM Personal System Configuration (PerSys) is a utility that allows a user to configure many applications and system settings through a single interface. You will use PerSys's export operations to facilitate the migration from one workstation to another.

15.2 Settings that SMA can transfer

The OS/2 settings that System Migration Assistant will support are the following:

- Computer Name
- Workgroup/Domain
- Computer Description
- TCP/IP Address
- Subnet Mask
- Router/Gateway
- DHCP
- DNS Hostname
- DNS Domain
- DNS server search order

15.3 The migration of settings from OS/2 to Windows takes two steps.

1. IBM PerSys will capture the settings on OS/2 on put them in a migration profile file.
2. System Migration Assistant, TARGET or TARBAT then reads the migration profile file and applies the migration.

15.4 Making a profile using OS/2 Persys

Make sure you adjusted the OS/2 settings to migrate first. Then you must execute Persys,

To execute Persys, on the OS/2 Desktop:

1. Click the OS/2 shell LaunchPad drawer button.
2. At the OS/2 command line, change to the directory where Persys is located. Example: CD \PERSYS
3. Click **Export** on Personal System Configuration window. On exporting, Persys writes a migration profile file to disk.
4. Type the file name you wish at **Save as filename**. Keep the .PSD extension. Example: SMA.PSD
5. Click **OK**.
6. Click **Exit**

NOTE: The file extension **must** be **.psd**.

15.5 Migrating OS/2 profile to Windows

To migrate OS/2 profile to Windows, do one of the processes described in Chapter 10, "Migrating your computer profile to other computers" on page 117.

Chapter 16. Automating SMA further using IBM's LCCM

16.1 Overview

Using System Migration Assistant, setting up a new PC is faster and cost less than before, often done in just minutes. Combine this program with the network reach of **IBM LANClient Control Manager (LCCM)**, version 2.5.1 plus Service Pack 3, and you can migrate PC settings remotely to hundreds of machines. This means less administrator time, fewer help desk calls and less inconvenience to the user.

LCCM is an IBM Universal Manageability tool. IBM LCCM distributes and installs software on network computers. LCCM automates the process of software deployment.

Unlike other software that deploys software, IBM LCCM can install the operating system as well. When used with IBM PCs and IBM hardware's Wake-on-LAN, LCCM can remotely turn on/off network computers.

There are substantial benefits to using LCCM with SMA. It reduces the Total Cost of Ownership.

LCCM can install System Migration Assistant on both source and target computers.

16.2 Obtaining LCCM

You can obtain a copy of LCCM at this Web site: <http://www.pc.ibm.com/us/desktop/lccm/>
Make sure you also download and install LCCM Service Pack 3. Service Pack 3 contains the support files for SMA 2.1 so you do not have to merge the products manually.

16.3 Example on Target computer

This is an example of using LCCM with System Migration Assistant.

16.3.1 Requisites

- LANClient Control Manager version 2.5.1 or above installed and running on a Windows NT 4.0 server.
- LCCM Service Pack 3 installed on LCCM Server
- Administrator Privileges on the server.
- Understanding of LCCM version 2.5.1.
- Source Client computer to run SMA and create SMA files.
- Target Client computer to receive Operating System install from LCCM.
- You have run SMA (Phase 1) on the Source Client computer and have produced migration profile files.
- Copy of the migration files (SMA file and contents files) to locations indicated.

Knowledge of LCCM version 2.5.1, including basic network technology and terminology, are required to understand this section.

16.3.2 Instructions

This example uses LCCM to automate SMA.

The steps detailed enclosed are a sample migration of settings to a supported IBM PC system.

16.3.2.1 Tasks to do on LCCM

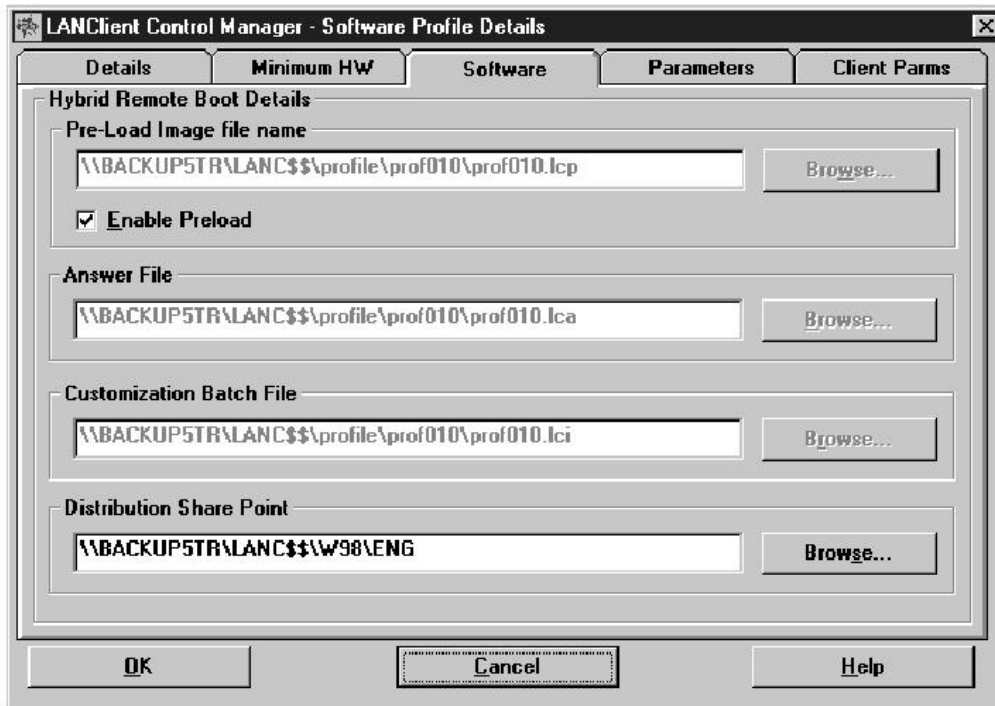
- Create a Windows 95, Windows 98, Windows NT 4.0, or Windows 2000 profile configured to use SMA
- Assign desired target clients to the LCCM profile
- Define the SMA variables within the Client Assignment Wizard
- Assign and process a system using the SMA enhanced LCCM profile

16.3.2.2 Create a Windows Profile to be used with SMA:

1. Create a profile at the LCCM console using the profile wizard.
2. Make sure you select the check box titled "Use System Migration Assistant with this profile".

16.3.2.3 Assign clients and define SMA variables for them

1. After the profile is created, assign the desired target clients to that profile.
2. In the Client Assignment Wizard, fill in the full path and file name for the SMA file (.SMA file extension) for the variable titled "SMA File Path".
3. Then fill in the full path for the SMA contents (folder containing .PRC and .C01 files, etc.) for the variable titled "SMA Contents Folder".



16.3.2.4 Run SMA through LCCM.

1. Assign a client, or clients, to this new profile. When the profile wizard prompts you for the SMA_FILE value - input the name of the SMA migration file for that particular client.
2. Process the profiles as you would a normal software profile. The SMA enhancement to the LCCM process will occur automatically after the operating system installation phase. The batch mode version of SMA (tarbat.exe) that is included with LCCM Service Pack 3 will run on the target system, applying the SMA file and contents that were specified in the Client Assignment Wizard.

Note: Some SMA personality settings are specific to the user that is logged on when the settings are captured. These include "Wallpaper", "Colors", "Desktop Icons", and all other settings that have to do with desktop appearance. These settings will not transfer to the client target system. However, all non-user specific settings and all data files should transfer without problems.

Chapter 17. Appendix A User Assistance

17.1 SMA Support

IBM supports System Migration Assistant via e-mail for registered users only. Response time varies on support queries. You may access the support form through your web browser at this IBM website:

<http://www.pc.ibm.com/us/desktop/lccm/esupport.html>

17.2 User Support Forum

For new and advanced users of SMA, a SMA Forum Website is available. IBM personnel monitor this Forum. The SMA Forum discusses and answers many of the common questions relating to SMA and its implementation. The Forum is accessible from the SMA home page at:

<http://www6b.pc.ibm.com:8080/~ums>

Chapter 18. Appendix B Related Publications

The publications listed in this section are suitable for learning more about the topics covered in this document.

18.1 International Technical Support Organization Publications (Redbooks)

For information on ordering these ITSO publications see Redbooks Web Site at <http://www.redbooks.ibm.com>, 1-800-879-2755.

Using LCCM Functions with Servers with Servers and Workstations. SG24-5292-00

18.2 Redbooks on CD-ROMs

Redbooks are also available on CD-ROM.

18.3 Other Publications

LCCM Training and Procedures Guide, available at <http://www.pc.ibm.com/us/desktop/lccm/docs.html>

To learn and understand more about the following Microsoft products, consult your Windows documentation or contact Microsoft:

Microsoft Windows '95
Microsoft Windows '98
Microsoft Windows NT Workstation
Microsoft Windows NT 4.0 Server
Microsoft Windows 2000 Professional
Microsoft Windows 2000 Standard Server
Microsoft Windows 2000 Advanced Server

Other Tools – IBM has many tools and utilities available like SMA. IBM has devised a number of ways to integrate system management software with intelligent hardware. An example is Wake on LAN, a product that enables you to remotely manage the clients in your network even if they have been turned off. More information is available about this at <http://www.pc.ibm.com/ww/solutions/enterprise/sysmgmt/index.html>.

Chapter 19. Appendix C Batch Example

Concepts

This is a sample batch file written in QBASIC. It demonstrates saving substantial time and money. The system administrator does the work on their machine.

This is the example scenario:

The enterprise has an older computer atmosphere. There is no standard computer-working environment in place. People have set up PC's however they want. There are many personal computers and they are very individualized.

The development department has received a new order of IBM PCs. There are 55 old PC's and 55 new ones. They need the look & feel transported onto the new machines. They also need to have new computer names and TCP/IP addresses.

IBM LCCM was used to load the operating system on the development department's and the sales group new machines. It was also used to install SMA on the source and target machines.

The systems administrator's computer does the work of creating and scheduling the jobs to migrate the work environments to new PCs.

Note that the system administrator has a convention for naming computers.

Dev is the name of the development group. A number is placed next to the computer's name to indicate which machine it is. For example \\dev0_JohnB is the first machine John received, and John has a test machine of \\dev1_JohnB as well. Making a new machine would increment it to "\\dev2_JohnB". The department's computers are found by looking for \\dev in the computer's name as the department group they belong to.

"Sale's" department computer would be found by "\\Sales". Sales upgrades 20 old PCs to 20 new PCs.

New computers are named target01, target02, etc.

The system administrator's batch routine captures the names of all computers on the network. It then finds the computers in-group development.

The SysAdmins computer's script writes a 'command file' for SrcBat.exe on the source computer. It writes a batch job on the source computer to be run later.

The system administrator's computer then schedules the job to run at 2:00am on the source computer.

The batch routine writes a 'command file' for TarBat.exe on the source computer. It then writes a batch job on the target computer to be run later.

The system administrator's computer then schedules the job to run at 2:30am on the target computer.

This program runs with qbasic. qbasic was used because it comes with MS Windows free and can be used for batch operations. Qbasic has much more capability than just using Windows batch commands. Note that when referring to files that they are 8 characters, which Qbasic likes. Error and message handling were omitted for the sake of keeping the example brief.

The system administrator has set up share rights on all the computers.

The program is executed by typing the following at a cmd prompt:

```
Qbasic /run smasysad.bas
```

```
'===== smasysad.bas =====  
'===== Copyright 1999, IBM, all rights reserved.
```

```
'----- Declare subroutines-----  
DECLARE SUB WriteSmaSourceCommandFile (ComputerName$)  
DECLARE SUB WriteSmaSourceJobFile (ComputerName$)
```

```
DECLARE SUB WriteSmaTargetCommandFile (ComputerName$)  
DECLARE SUB WriteSmaTargetJobFile (ComputerName$)
```

```
'----- Declare Constants -----  
CONST SELECTIVE_Migration=1  
CONST MASS_Migration=0
```

```
'----- Declare variables -----  
' CHR$(34) makes a quote mark.
```

```
SHARED TempTargetComputerName$ = "Target"
```

```
SmaSourceCommandFile$ = "SourceCmd.dat"  
SmaTargetCommandFile$ = "TargetCmd.dat"
```

```
ComputerName$ = ""
```

```
'Offset is used to renumber tcp/ip addresses  
SHARED Offset = 50  
'IndexNo is used with tcp/ip base + offset +IndexNo for new tcp/ip address  
SHARED IndexNo = 0
```

```
'----- Main Logic -----
```

```
'On the System Administrators Computer  
CHDIR "C:\Batch\Migrate"  
SHELL "Net view > Computrs.dat"
```

```

FindDeptComputersToMigrate$ = "find " + CHR$(34) + "\\DEV" + CHR$(34) +
" Computrs.dat > TarGroup.dat"
SHELL FindDeptComputersToMigrate$

OPEN "TarGroup.dat" FOR INPUT AS #1

DO WHILE NOT EOF(1)

    LINE INPUT #1, ComputerName$
        'Index is used for computer number and TCP/IP
increment
    IndexNo = IndexNo + 1
    PRINT MID$(ComputerName$, 3, 40)

    ' ----- Drive X is the Source computer drive.
    SHELL "net use x: "+ComputerName$+"+CHR$(34)+"\Program
Files"+CHR$(34)+"\IBM\SMA"
    ' ----- Drive Y is the Target computer drive.
    SHELL "net use y: " +
TempTargetComputerName$+STR$(IndexNo)+CHR$(34)+"\Program
Files"+CHR$(34)+"\IBM\SMA"

    WriteSmaSourceCommandFile(ComputerName$)
    WriteSmaSourceJobFile(ComputerName$)
    SHELL ScheduleJobOnSourceComputer$

    ' ----- Drive Y is the Target computer drive.
    WriteSmaTargetCommandFile(ComputerName$)
    WriteSmaTargetJobFile(ComputerName$)
    SHELL ScheduleJobOnTargetComputer$

    SHELL "net use x: /delete
    SHELL "net use y: /delete

LOOP

CLOSE #1

'System
'-----
'----- End of Main logic -----
'-----

'----- Subroutines -----
SUB WriteSmaSourceCommandFile (ComputerName$) STATIC

    OPEN "x:" + SmaSourceCommandFile$ FOR OUTPUT AS #2
    PRINT #2, "REM This batch file written and distributed by SmaSysAd.bas
on Sys4_SysAdminServer"
    PRINT #2, ";===== "
    PRINT #2, "[Transfer_Mode]"
    PRINT #2, "TransferMode=selective"
    PRINT #2, ";===== "
    PRINT #2, "[Output_Location]"
    PRINT #2, "OutputLocation=c:\temp\test"
    PRINT #2, ";===== "
    PRINT #2, "[Personality_Start]"

```

```

PRINT #2, "accessibility=1"
PRINT #2, "activedesktop=0"
PRINT #2, "colors=1"
PRINT #2, "desktopicons=1"
PRINT #2, "display=1"
PRINT #2, "iconmetrics=1"
PRINT #2, "internetbrowser=1"
PRINT #2, "keyboard=1"
PRINT #2, "mouse=1"
PRINT #2, "pattern=1"
PRINT #2, "power=1"
PRINT #2, "PRINT #2, ers=1"
PRINT #2, "screensaver=1"

PRINT #2, "sendtomenu=1"
PRINT #2, "SHELL=1"
PRINT #2, "sound=1"
PRINT #2, "startmenu=1"
PRINT #2, "taskbar=1"
PRINT #2, "userprofiles=1"
PRINT #2, "wallpaper=1"
PRINT #2, "windowmetrics=1"
PRINT #2, "[Personality_End]"
PRINT #2, ";===== "
PRINT #2, "[Connectivity_Start]"
PRINT #2, "computerdescription=0"
PRINT #2, "computername=1"
PRINT #2, "dnsconfiguration=1"
PRINT #2, "mappeddrives=0"
PRINT #2, "rasnetworking=1"
PRINT #2, "sharedfolders=1"
PRINT #2, "tcpipconfiguration=0"
PRINT #2, "winsconfiguration=1"
PRINT #2, "workgroup=1"
PRINT #2, "domain=0"
PRINT #2, "[Connectivity_End]"
PRINT #2, ";===== "
        CLOSE #2

```

```
END SUB
```

```
'-----
```

```
SUB WriteSmaSourceJobFile (ComputerName$) STATIC
```

```
PRINT #3, "REM This batch file written and distributed by SmaSysAd.bas  
on Sys4_SysAdminServer"
```

```
        ScheduleJobOnSourceComputer$ = "AT " + ComputerName$ + " 02:00 "  
+ CHR$(34) + " cmd /c c:\Batch\SmaSourceJob.bat " + CHR$(34)
```

```
        OPEN "x:" + SmaSourceJobFile$ FOR OUTPUT AS #3  
        'target computer will read the Command file on the source  
computer
```

```
        PRINT #3, "SmaSrc /c "+SmaSourceCommandFile$  
        CLOSE #3
```

```
END SUB
```

```

'-----
SUB WriteSmaTargetCommandFile (ComputerName$)STATIC

    OPEN "y:" + TempTargetComputerName$+STR$IndexNo) FOR OUTPUT AS #4

    Head$ = MID$(ComputerName$, 1, Locater - 3)
    Digit = VAL(MID$(ComputerName$, Locater - 2, 2))
    Tail$ = MID$(ComputerName$, Locater, 60)
    Head$ + "__" + STR$(Digit) + "__" + Tail$
    'increment the computer name so it is unique
    Digit = Digit + 1
    IF Digit < 10 THEN
        DigitString$ = "0" + LTRIM$(STR$(Digit))
    ELSE
        DigitString$ = LTRIM$(STR$(Digit))
    END IF

    PRINT #4, "REM This batch file written and distributed by SmaSysAd.bas
on Sys4_SysAdminServer"
    PRINT #4, ";=====
    PRINT #4, "[TCPIP]"
    PRINT #4, "New_Value=9.39.75."+ STR$(12+Offset+IndexNo)
    PRINT #4, ";=====
    PRINT #4, "[Machine_Name]"
    PRINT #4, "Machine_Name="+Head$+DigitString$+Tail$
    PRINT #4, ";=====
    PRINT #4, "[Domain]"
    PRINT #4, "Domain=TestDomain"
    PRINT #4, ";=====
    PRINT #4, "[Continue_Even_If_Other_Apps_Running]"
    PRINT #4, "ContinueEvenIfOtherAppsRunning=0"
    PRINT #4, ";=====

    CLOSE #4

END SUB

'-----
SUB WriteSmaTargetJobFile (ComputerName$)STATIC

    PRINT #5, "REM This batch file written and distributed by SmaSysAd.bas
on Sys4_SysAdminServer"

    ScheduleJobOnTargetComputer$ = "AT " +
TempTargetComputerName$+STR$(IndexNo) + " 02:30 " + CHR$(34) + " cmd /c
c:\batch\SmaTargetJob.bat" + CHR$(34)

    OPEN "y:" + SmaTargetJobFile$ FOR OUTPUT AS #5
    PRINT #5, "TarBat /c "+SmaTargetCommandFile$
    CLOSE #5

END SUB
'-----
'-----

```


Chapter 20. Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

*IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106, Japan*

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation

Department number/Building number

Site mailing address

City, State; Zip Code

_U.S.A. (or appropriate country)

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrates programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. You may copy, modify, and distribute these sample programs in any form without payment to IBM for the purposes of developing, using, marketing, or distributing application programs conforming to IBM's application programming interfaces.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. _enter the year or years_. All rights reserved.?

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

20.1 Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

TSM
IBM
IntelliStation
Netfinity
OS/2
ThinkPad

Tivoli, TSM, Tivoli Storage Manager and NetView are trademarks of Tivoli Systems Inc. in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both

Other company, product, and service names may be trademarks or service marks of others

Glossary

TSM. Tivoli Storage Manager.

attribute. In the Windows operating system, a characteristic or property of a file, folder, or object, such as size, last modification date, or flag.

batch. (1) An accumulation of data to be processed. (2) A group of records or data processing jobs brought together for processing or transmission. (3) Pertaining to activity involving little or no user action. See *interactive*.

batch file. A file that contains a series of commands to be processed sequentially.

check box A square box with associated text that represents a choice. When a user selects the choice, the check box is filled to indicate that the choice is selected. The user can clear the check box by selecting the choice again, thereby deselecting the choice.

check mark A character (the check mark) that indicates that a choice is active.

click To press the mouse button. By default, this is the left button.

command. (1) The name and parameters associated with an action that can be performed by a program. A command is one form of action request. Users type in the command and enter it. (2) An action users request to interact with the command area.

command. The name and any parameters associated with an action that can be performed by a program. The command is entered by the user; the computer performs the action requested by the command name.

Command file. For SMA batch programs, the file that gives instructions to SMA on what, where and how to migrate.

command line. A line on a display screen (usually at the bottom of the screen) in which only commands can be entered.

Computer name The network name of the computer. The name is unique, no two computers on the network can have the same name.

command prompt. A field prompt showing the location of the command entry field in a panel.

Connectivity settings. Collections of network settings.

DEFAULT.SMA The default name for the file that the profile is written to.

desktop. A graphical user interface (GUI) that represents a real desk. It is a folder that fills the computer screen and holds the objects that enable a user to interact with and perform operations on the system.

Domain A group of servers and workstations tied together for the purposes of common management, identified by a domain name

Drives - contains diskette and hard disk drives (A, C, and so on).

extended partition. The portion of a hard drive which covers whatever space remains after you create your primary partition or partitions. You can have only one per hard disk.

Folder A type of file containing the names and controlling information for other files or other folders.
folder. A named grouping of files in a file system.

function key. A key that causes a specified sequence of operations to be performed when it is pressed, for example, F1 and Alt-K.

gateway. (1) A functional unit that interconnects a local data network with another network having different protocols. (2) A host that connects a TCP/IP network to a non-TCP/IP network at the application layer. See also *router*.

graphics. A picture defined in terms of graphic primitives and graphics attributes

icon. A pictorial representation of an item the user can select. Icons can represent items (such as a document file) that the user wants to work on and actions that the user wants to perform. In the Presentation Manager, icons are used for data objects, system actions and minimized programs.

interactive. Pertaining to a program or a system that alternately accepts input and then responds. An interactive system is conversational, that is, a continuous dialog exists between user and system. See *batch*.

IP address. The unique code assigned to each device or workstation connected to a network. A standard internet address is a 32-bit address field. This field can be broken into two parts. The first part contains the network address; the second part contains the host number.

logical drive. An allocated space on a hard disk that is defined by size and accessibility. See *extended partition, primary partition*.

network. An arrangement of nodes and connecting branches. Connections are made between data stations.

open. To start working with a file, folder or other object.

parameter. A keyword or variable used in conjunction with a command to affect its result.

Personality settings. The Windows desktop, system, user environment, preferences and printers groups of settings.

primary partition. A bootable portion of the hard disk. You can create four primary partitions or three primary and one extended partition.

Profile. The actual snapshot of the objects on the source computer. It is written to disk.

radio button A circle with text beside it. Radio buttons are combined to show a user a fixed set of choices from which the user can select one. The circle becomes partially filled when a choice is selected.

registry. On Windows NT, a central database that contains information about hardware, applications, and operating system settings for each machine on the network. In the database are subtrees, keys, hives and value entries.

Registry key

Microsoft's - A folder that appears in the left pane of a Registry Editor window. A key can contain subkeys and value entries. For example: Environment is a key of KKEY_CURRENT_USER. See also *subkey*.

return code. A value returned from SMA which provides information about the success or failure of the migration.

select. To mark or choose an item. Notice that *select* means to mark or type in a choice on the screen; *enter* means to send all selected choices to the computer for processing.

Source computer. The computer that SMA takes a snapshot of and copies information from.

source folder. The folder where the information to be migrated originates.

subfolder. A folder contained within another folder in a file system hierarchy.

subnet. A networking scheme that divides a single logical network into smaller physical networks to simplify routing.

subnet address. The portion of the host address that identifies a subnetwork.

subnet mask. A mask used in the IP protocol layer to separate the subnet address from the host portion of the address.

Target computer. The computer that SMA migrates objects to.

target folder. The folder to which information is written. Contrast with *source folder*.

TCP/IP. Transmission Control Protocol/Internet Protocol.

text. Characters or symbols.

variable. A name or value supplied by the user.

WAN. Wide area network.

wide area network (WAN). A network that provides communication services to a geographic area larger than that served by a local area network.

wildcard character. The global file-name characters ? or *.