IBM TotalStorage

SMI-S Agent for Tape on Linux Systems Installation Guide

IBM TotalStorage

SMI-S Agent for Tape on Linux Systems Installation Guide

> **Note:**
> Before using this information and the product it supports, read the information in the **Notices** sections.

Contents

Tables

Figures

About this guide

This publication provides installation instructions for the IBM® TotalStorage®
SMI-S Agent for Tape on Linux systems.

Who should use this guide

This publication is for system administrators and system and application
programmers, or whoever is responsible for installing the SMI-S Agent for Tape
Libraries on Linux systems.

Conventions used in this guide

This guide uses bold, italic, and other typographic styles to highlight various types
of information in the text. See Table 1 for a list of conventions.

Table 1. Conventions used in this guide

bold	Denotes a command, user ID, password, or labels on buttons.
italics	Denotes titles of other manuals or books.
`monospace`	Denotes a Web address that needs to be typed in. Also denotes an example.
`screen`	Used to show the screen output you should see.
Note	Introduces special considerations about the current topic.
(>) greater than and (<) less than	Shows the optional and substitution parameters in the description of commands. The explanation of the optional or substitution parameters are included following the word "Where."

Related Information

Refer to the following publications and sources for additional information about
the IBM SMI-S Agent for Tape and related IBM tape storage products. To ensure
that you have the latest publications, visit the web at:

`http://www.ibm.com/storage/support/software/smistape`

IBM TotalStorage 3584 Tape Library Publications

- *IBM TotalStorage 3584 Tape Library Operator Guide*, GA32-0468
- *IBM TotalStorage 3584 Tape Library Maintenance Information*, part number 24R2190
- *IBM TotalStorage 3584 Tape Library SCSI Reference*, GA32-0454
- *The IBM LTO Ultrium Tape Libraries Guide*, SG24-5946

Other Publications and Sources

- For a list of compatible software, operating systems, and servers for Ultrium
  Tape Drives, visit the web at `http://www.ibm.com/storage/lto`. Under 3584 Tape

ix

Library, select Product details. Select LTO compatibility. Under Compatibility information, select 3584 Tape Library supported servers and operating systems or Independent Software Vendor Matrix (ISV) for LTO.

- For a list of compatible software, operating systems, and servers for 3592 Tape Drives, visit the web at http://www.ibm.com/servers/storage/tape/drives. Under 3592 Tape Drive, select Product details. Select Resource library. Under Compatibility information, select 3592 Tape Drive supported servers or Independent Software Vendor Matrix (ISV) for 3592 Tape Drive.

- *IBM TotalStorage 3953 Tape Frame Model F05 and Library Manager Model L05 Introduction and Planning Guide*, GA32-0472

- *IBM TotalStorage 3953 Library Manager Model L05 Operator Guide*, GA32-0473

- *IBM TotalStorage 3953 Tape Frame F05 Maintenance Information Model L05*, EC H81225, part number 96P1661.

- *IBM TotalStorage Enterprise Tape System 3592 Operator Guide*, GA32-0465

- *IBM TotalStorage Enterprise Tape System 3592 Introduction and Planning Guide*, GA32-0464

- *IBM TotalStorage Enterprise Tape System 3592 SCSI Reference*, GA32-0466

- *IBM TotalStorage LTO Ultrium Tape Drive SCSI Reference*, GA32-0450

- @server *Safety Notices*, G229-9054. This publication is available at http://www.ibm.com/servers/resourcelink. To access, register for a userid and password, then select Library in the navigation area.

- *IBM Ultrium Device Drivers Installation and User's Guide*, GA32-0430

- *IBM Ultrium Device Drivers Programming Reference*, GC35-0483

- *Implementing IBM Tape in Linux and Windows*, SG24-6268. This book is available on the web at http://www.redbooks.ibm.com/redpieces/pdfs/sg246268.pdf.

- *Implementing IBM Tape in Unix Systems*, SG24-6502. This book is available on the web at http://www.redbooks.ibm.com/redbooks/pdfs/sg246502.pdf.

Ordering IBM publications

This section tells you how to order copies of IBM publications and how to set up a profile to receive notifications about new or changed publications.

IBM publications center

The publications center is a worldwide central repository for IBM product publications and marketing material.

The IBM publications center offers customized search functions to help you find the publications that you need. Some publications are available for you to view or download free of charge. You can also order publications. The publications center displays prices in your local currency. You can access the IBM publications center through the following Web site:

http://www.ibm.com/shop/publications/order

Publications notification system

The IBM publications center Web site offers you a notification system for IBM publications.

If you register, you can create your own profile of publications that interest you. The publications notification system sends you a daily e-mail that contains information about new or revised publications that are based on your profile.

If you want to subscribe, you can access the publications notification system from the IBM publications center at the following Web site:

http://www.ibm.com/shop/publications/order

How to send your comments

Your feedback is important to help us provide the highest quality information. If you have any comments about this information or any other SMI-S Agent for Tape documentation, you can submit them in the following ways:

- e-mail

  Submit your comments electronically to the following e-mail address:

  starpubs@us.ibm.com

  Be sure to include the name and order number of the book and, if applicable, the specific location of the text you are commenting on, such as a page number or table number.

- Mail

  Fill out the Readers' Comments form (RCF) at the back of this book. Return it by mail or give it to an IBM representative. If the RCF has been removed, you can address your comments to:

  International Business Machines Corporation
  RCF Processing Department
  Department 61C
  9032 South Rita Road
  TUCSON AZ   85775-4401

Chapter 1. Installing IBM TotalStorage SMI-S Agent for Tape on Linux systems

This topic provides a high-level overview of the procedures for installing the IBM TotalStorage® SMI-S Agent for Tape on a Linux® operating system in both interactive and silent mode and the procedures for removing the IBM TotalStorage SMI-S Agent for Tape on a Linux operating system.

The IBM SMI-S Agent for Tape provides an interface that enables management applications to exploit tape library devices in a standardized way.

Prerequisites

All software required to run the IBM SMI-S Agent for Tape is contained on the CD-ROM.

The recommended operating systems and hardware requirements are listed below:
- IBM xSeries® with an Intel® Pentium® 4 processor and a minimum of 515 MB of RAM
- SuSE Linux Enterprise Server 9

Preparing for Installation

Note: It is **strongly recommended** that during the installation process **not to interrupt** the program by abnormal methods (CTRL-C, closing the behind windows, shut-down the power source or something like this) because an interruption, otherwise then through the application windows **Cancel** button, can cause unpredictable effects in the system.

Perform the following steps to prepare the SMI-S Agent for Tape installation on Linux systems:
1. Log on as a user with root authority.
2. Create a mount point or choose an existing mount point. To create a mount point called **/cdrom**, type the following command:

   `# mkdir /cdrom`
3. Mount the SMI-S Agent for Tape CD at the desired mount point. For example, to mount a compact disc inserted in a CD-ROM drive known as **/dev/cd0** at mount point **/cdrom**, type the following command:

   `# mount -o ro /dev/cd0 /cdrom`
4. Choose the destination paths for the SMI-S Agent for Tape components and be sure you have enough space available on the chosen destination.

   The installation program (installer) provides a default installation location ("**/opt/IBM/smis/tapeagent**") for the component. You can override this by using the installer browse function. When you click Next, the installer analyzes the available space for the location you provide. If there is not enough space, you will not be able to proceed to the next panel in the installation process.
5. Change the current directory to the mount point for the CD-ROM drive.

For example, if the CD-ROM was mounted at the **/cdrom**, type the following command:

```
# cd /cdrom
```

6. Check for a **README** file located in the **doc** directory of the SMI-S Agent for Tape compact disc. This **README** can provide additional information that supersedes information in this guide.

7. You can also find this installation guide on the SMI-S Agent for Tape Libraries compact disc under the file name **SMI-S/install_guide.pdf**.

Chapter 2. Installing IBM TotalStorage SMI-S Agent for Tape in interactive mode

This section includes the steps to install the SMI-S agent in your Linux environment using the graphical mode.

Follow the instructions below to install IBM TotalStorage SMI-S Agent for Tape Libraries (SMI-S Agent for Tape) on a Linux system in interactive mod.

Perform the following steps to install the SMI-S Agent for Tape Libraries in interactive mode:

1. Log on as a user with root authority.
2. Create a mount point or choose an existing mount point. To create a mount point called **/cdrom**, type the following command:

   ```
   # mkdir /cdrom
   ```
3. Mount the SMI-S Agent for Tape CD at the desired mount point. For example, to mount a compact disc inserted in a CD-ROM drive known as **/dev/cd0** at mount point **/cdrom**, type the following command:

   ```
   # mount -o ro /dev/cd0 /cdrom
   ```
4. Choose the destination paths for the SMI-S Agent for Tape components and be sure you have enough space available on the chosen destination.

   The installation program (installer) provides a default installation location ("**/opt/IBM/smis/tapeagent**") for the component. You can override this by using the installer browse function. When you click Next, the installer analyzes the available space for the location you provide. If there is not enough space, you will not be able to proceed to the next panel in the installation process.
5. Launch the IBM Total Storage SMI-S Agent for Tape launchpad by issuing the following command:

   ```
   # /cdrom/SMI-S/launch+pad.linux
   ```
6. The following options are displayed when the LaunchPad window opens (see Figure 1 on page 4).

   SMI-S Agent for Tape overview
   > Offers information about IBM TotalStorage SMI-S Agent for Tape software.

   Readme file
   > Offers any last minute product information that did not make it into this installation guide.

   Installation guide
   > Offers instructions on how to install IBM TotalStorage SMI-S Agent for Tape Libraries (a softcopy of this document).

   SMI-S Agent for Tape Web site
   > Offers information from the product Web site.

   Installation wizard
   > Starts the IBM TotalStorage SMI-S Agent for Tape installation program.

Configuring the SMI-S Agent
> Offers information about configuring IBM TotalStorage SMI-S Agent for Tape Libraries.

Exit   Exits the Launchpad program.

You can select the desired option to see information about the product or to launch the product installation wizard.
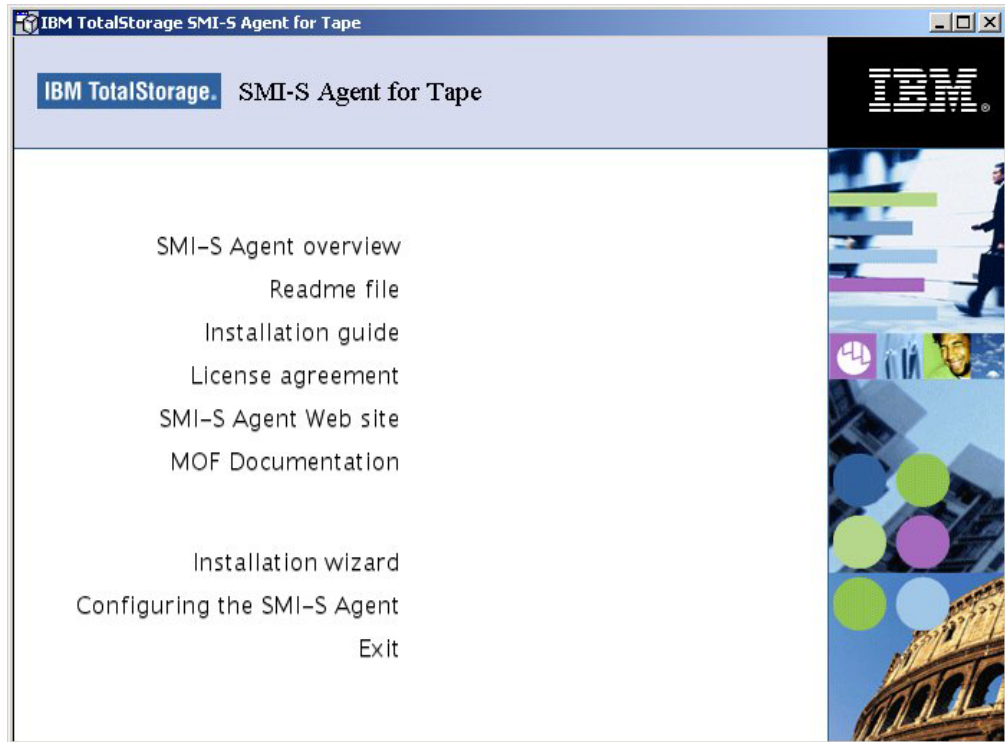

Figure 1. LaunchPad window

7. Click the **Readme file** from the LaunchPad window or see the **README.txt** file located in the **/cdrom/SMI-S** directory on the IBM TotalStorage SMI-S Agent for Tape Libraries CD to check for information that might supersede the information in this guide.

8. Click **Installation wizard** from the LaunchPad window to start the installation of IBM TotalStorage SMI-S Agent for Tape.

   Note: The LaunchPad window remains open behind the installation wizard so that you can access product information during the installation process. Click **Exit** if you want to close the LaunchPad.

9. There will be a slight delay while the software loads on your system. After the software loads, a window opens to display the following message:

```
Initializing InstallShield Wizard...
Preparing Java (tm) Virtual Machine ............................
...................................................
```

10. The SMI-S Agent for Tape installation program makes some system checking (operating system to be Linux, SuSE, Enterprise Server 9). If one of these conditions is not met the program displays an error message and exits.

11. The **Welcome** window opens suggesting what documentation you should review prior to installation (see Figure 2. Click **Next** to continue, or click **Cancel** to exit the installation.
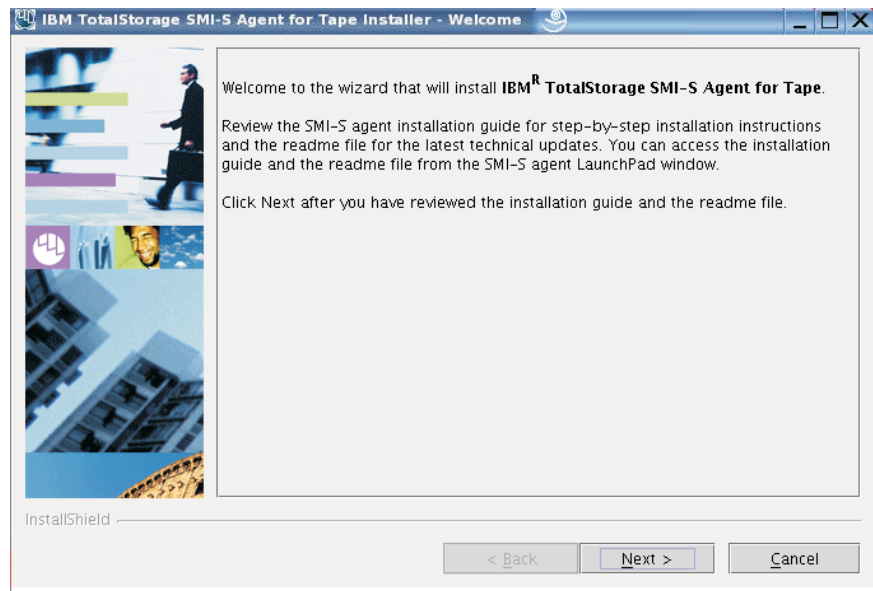
Figure 2. Welcome

12. Read the license agreement information when the **License Agreement** window opens (see Figure 3). Select **I accept the terms of the license agreement**, then click **Next** to accept the license agreement. Otherwise, select **I do not accept the terms of the license agreement** and click **Cancel** to exit the installation.

Figure 3. License Agreement

13. The **Destination Directory** window opens (see Figure 4). This window displays a field for the destination path. Select one of the following options:
    - Click **Next** to accept the default directory.

- Click **Browse** to select a different directory for the installation and then click **Next** to continue the installation process.
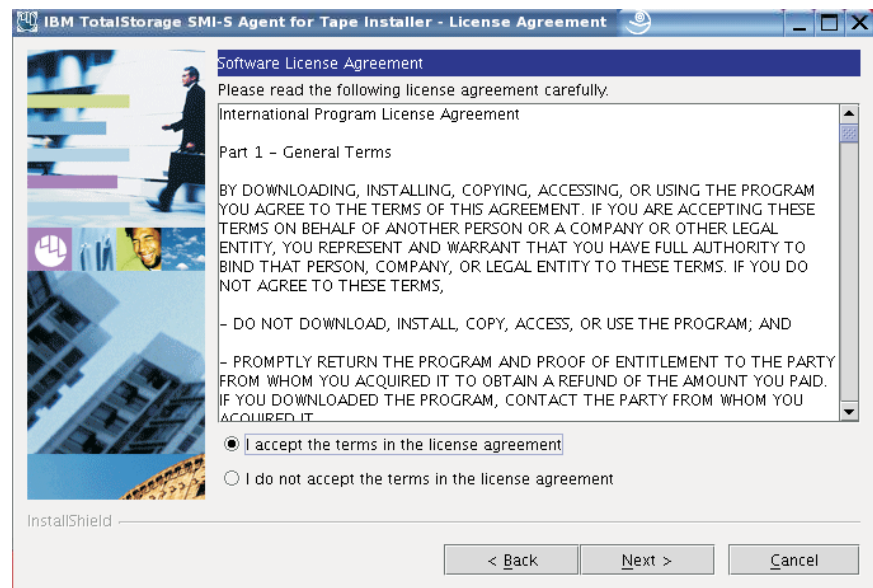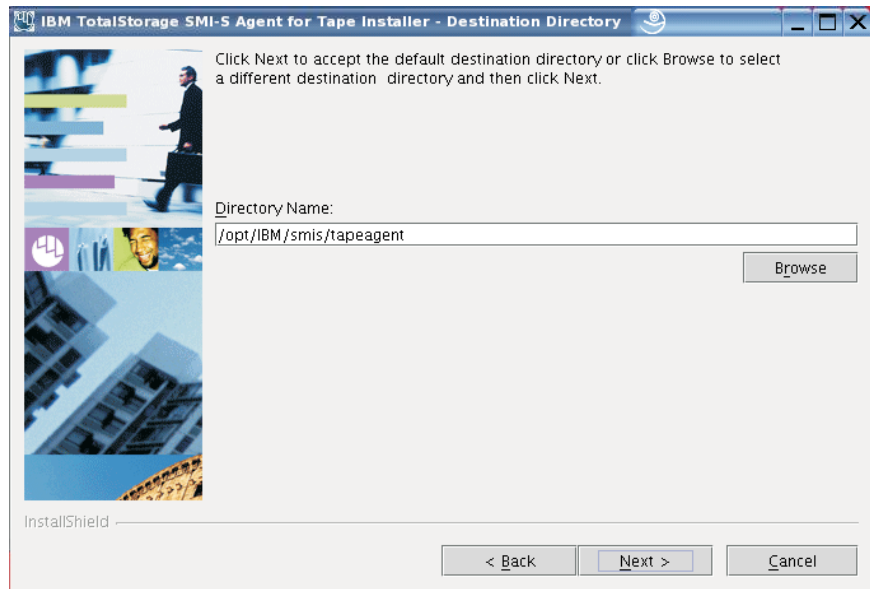- Click **Cancel** to exit the installation process.

Figure 4. Destination Directory

14. The **Server Communication Configuration** window opens (see Figure 5). Update the default port assignments and the default communication protocol for SMI-S Object Manager server by typing the unique port numbers and choosing the desired communication protocol for the product that have been registered on your system.

    You must enter the communication parameters for the SMI-S Object Manager server:
    - **Communication Protocol** - the communication protocol that the server will use;
    - **HTTP Port** - is the port number that SMI-S Object Manager server will use for HTTP transport. (The port number must be a port that is not being used by another process on the system.)
    - **HTTPS Port** - is the port that SMI-S Object Manager server will use for secure HTTP transport (HTTPS). (The port number must be a port that is not being used by another process on the system.)

    These values must not conflict with existing ports assignments on the system.

    Click **Next** to continue, click **Back** to go back or click **Cancel** to exit the installation.
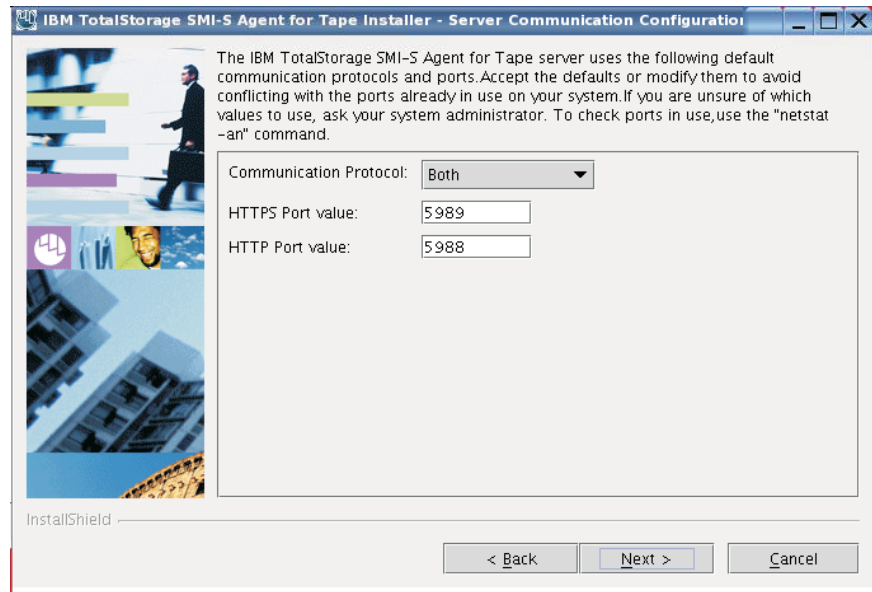
Figure 5. Server Communication Configuration

15. The **Install Preview** window opens (see Figure 6). You can see a review of all the parameters you selected in the previous windows.

    Click **Install** to begin the product installation, click **Back** to go back or click **Cancel** to exit the installation wizard.
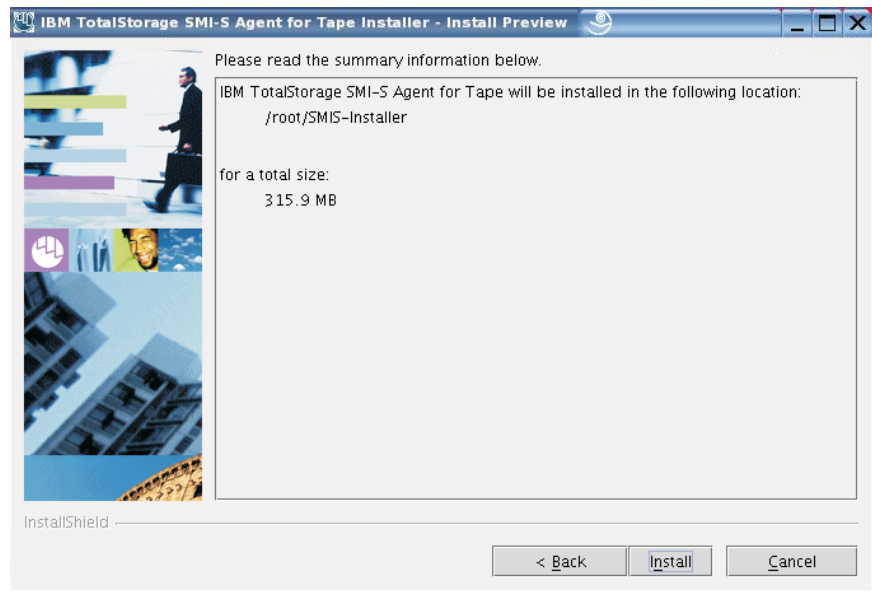
Figure 6. Install Preview

16. The **Installation Progress** window opens (see Figure 7 on page 8). Wait for the SMI-S Agent for Tape product applications to be installed by the installation wizard.
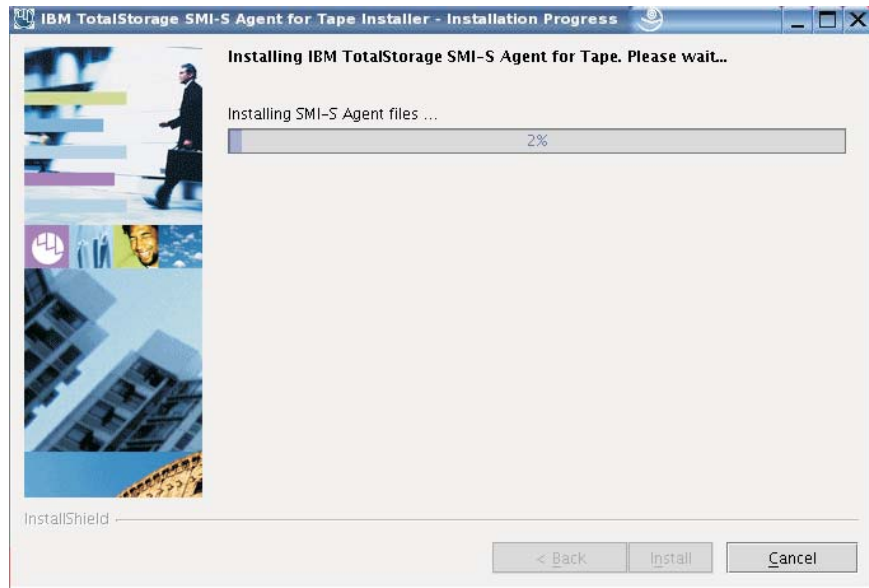
Figure 7. Installation Progress

17. The **Finish** window opens (see Figure 8). Before proceeding, you might want to review the log file for any possible error messages. The log file is located in **xxx/logs/install.log**, where xxx is the destination directory where the SMI-S Agent for Tape was installed. The **install.log** file contains a trace of the installation actions.

Figure 8. Finish

Click **Finish** to exit the installation wizard.

18. The product once installed, you should perform the configuration tasks. You can access the instructions for the configuration tasks from the LaunchPad window, by clicking the ″Configuring the SMI-S Agent″ item.

19. After reviewing the configuration tasks, you can close the LaunchPad window, clicking the **Exit** item.

Chapter 3. Installing IBM TotalStorage SMI-S Agent for Tape on Linux system in silent mode

This topic describes the procedures to install IBM TotalStorage SMI-S Agent for Tape on Linux system in silent mode.

Steps

Perform the following steps to install the SMI-S Agent for Tape Libraries in silent mode:

1. Log on to your Linux system as a user with root authority.
2. Before launching the installation program, check the software and hardware prerequisites.
3. Insert the SMI-S Agent for Tape CD and mount it as aforementioned in Chapter 2, "Installing IBM TotalStorage SMI-S Agent for Tape in interactive mode," on page 3.
4. Change the current directory to the mount point for the CD-ROM drive. For example, if the CD-ROM was mounted at the /cdrom, type the following command:

   # cd /cdrom
5. Read the **README.txt** file located on the SMI-S Agent for Tape Libraries CD to check for information that might supersede the information in this guide.
6. Copy the template response file from the **/cdrom/SMI-S/LINUX** directory of the product CD to a location on your system in order to modify it according to your installation parameters. The response file contains all the installation parameters which values can be modified during an interactive installation.
7. Modify your copy of the response file as described below:
   a. Open the response file using a text editor.
   b. Replace the parameters values with the appropriate values for each uncommented option. A correct set of options and values that must be specified for a product silent installation is shown in the example of the response file below.
   c. For the ports values, you must pay attention that the entered ports values to be free (to be not used by other applications on your system. Use the command "netstat -an" to verify the ports in use on your system.
   d. Save the changes made to the response/options file.
8. Launch the following command, in the same Command Prompt window in which you changed the current directory to **/cdrom/SMI-S/LINUX** of the CD, to start the SMI-S Agent for Tape installation program in silent mode:

   ./setuplinux -options <responsefile-path>/<responsefile>

   where,

   <responsefile-path> - is the path where the response file was created before;

   <responsefile-path> - is the relative name of the response file that you created and modified before.

   Below is displayed an example of a template response file with the specific parameters.

```
############################################################################
#
# InstallShield Options File
#
# Wizard name: Install
# Wizard source: setup.jar
# Created on: Mon Feb 07 16:08:10 PST 2005
# Created by: InstallShield Options File Generator
#
# This file contains values that were specified during a recent execution of
# Setup. It can be used to configure Setup with the options specified below when
# the wizard is run with the "-options" command line option. Read each setting's
# documentation for information on how to change its value.
#
# A common use of an options file is to run the wizard in silent mode. This lets
# the options file author specify wizard settings without having to run the
# wizard in graphical or console mode. To use this options file for silent mode
# execution, use the following command line arguments when running the wizard:
#
#    -options "responsefile.txt"
#
############################################################################

-silent

############################################################################
#
# IBM SMI-S Agent for Tape Install Location
#
# The install location of the product. Specify a valid directory into which the
# product should be installed. If the directory contains spaces, enclose it in
# double-quotes.
#

-P product.installLocation="/opt/IBM/smis/tapeagent"


############################################################################
#
# User Input Field - communicationProtocol
# The communication protocol type to be used when installing the product. Legal
# values are: "both" - for HTTPS and HTTP communication, "HTTPS" - for HTTPS
# communication, "HTTP" - for HTTP communication.
#

-W serverCommunicationConfig.communicationProtocol="xxx"


############################################################################
#
# User Input Field - httpPort
#
# The port number used by the SMI-S Object Manager server for HTTP transport.
# This value must not conflict with existing port assignments on the system.
#

-W serverCommunicationConfig.httpPort="12345"
############################################################################
#
# User Input Field - httpsPort
#
# The port number used by the SMI-S Object Manager server for HTTPS
# transport. This value must not conflict with existing port assignments
# on the system.
#

-W serverCommunicationConfig.httpsPort="1234"
```

9. Wait for the SMI-S Agent for Tape installation program to install the product. This can take 5-10 minutes.

10. Before proceeding, you might want to review the log file for any possible error messages. The log file is located in **xxx/logs/install.log**, where xxx is the destination directory where the SMI-S Agent for Tape was installed. The **install.log** file contains a trace of the installation actions.

11. If you don't see any errors messages in the log file, the product installation was successfully completed.

12. The product once successfully installed, you should perform the configuration tasks. You can read the instructions for the configuration tasks in the readme.txt file for the automatically installed script executables.

Chapter 4. Configuring the SMI-S Agent

This topic provides instructions for configuring the IBM TotalStorage SMI-S Agent for Tape on a Linux operating system using the scripts stored in the **cim_utils** directory created by the installation program.

Table 2. SMI-S Scripts

Script name	Descriptions
agentstatus.sh	Determines the status of the CIMOM server.
cimuser.sh	The SMI-S Agent maintains a list of authorized users. This script allows an administrator to manage the SMI-S Agent's users. To execute the script, the user must already be added as a SMI-S user.
mkcertificate.sh	The installer automatically runs this script to generate a 512 bit RSA private key. This is required when running in secure mode with SSL (Secure Socket Layer). mkcertificate.sh creates a certificate and two keys, one public key and one private key. When running unsecure, it is not required.
setdevice.sh	Configures tape libraries. setdevice.sh allows a user to configure the SMI-S Agent with a particular library. When the SMI-S Agent is first started after installation, the SMI-S Agent is not configured with library information. Set the library IP address using setdevice.sh. For 358x libraries, set the port and community using setdevice.sh.
setenv.sh	setenv.sh sets the environment variables so that the SMI-S Agent can find all the required library information to run properly.
startagent.sh	Starts the CIM Server if it is not running.
stopagent.sh	Stops the CIM server if it is running.

Table 3. SMI-S Script Arguments

Script name	Arguments
agentstatus.sh	

cimuser.sh	cimuser
	  add a user: -a -u username [-w password]
	  modify password:
	       -m -u username [-w old password] [-n new password]
	  remove a user: -r -u username
	  list all users: -l

mkcertificate.sh	

setdevice.sh	SetDevice
	  -a<add|del|list>
	  -t<3494|3581|3582|3583|3584>
	  [-l<IP|Alias> [-p <port> [-c<community> [-s<snmpversion>]]]
	
	  Examples:
	  SetDevice -aadd -t3584 -15.6.7.8 -p161 -cpublic -s2
	  SetDevice -aadd -t3583 -14.3.2.1
	  SetDevice -aadd -t3494 -lcimlib
	  SetDevice -aadd -t3584 -14.3.2.1
	  SetDevice -aadd -t3584

setenv.sh	

Table 3. SMI-S Script Arguments (continued)

Script name	Arguments
startagent.sh	
stopagent.sh	

Chapter 5. Removing IBM TotalStorage SMI-S Agent for Tape from an Linux system

You can use these procedures to remove the IBM TotalStorage SMI-S Agent for Tape Libraries from your Linux system.

Steps

Perform the following steps to remove the IBM TotalStorage SMI-S Agent for Tape:

1. Log on as root to the system where the SMI-S Agent for Tape is installed.

2. Run the uninstallation program, **uninstall**, from the **_uninst** subdirectory of the *<dest-path>*, by typing the following command:

   # *<dest-path/_uninst/uninstall>*

   where,

   <dest-path - is the path where SMI-S Agent for Tape software is installed (the default value is **/opt/IBM/smis/tapeagent**).

3. The SMI-S Agent for Tape Uninstaller **Welcome** window opens (see Figure 9). Click **Next** to continue or click **Cancel** to stop the removal of SMI-S Agent for Tape.
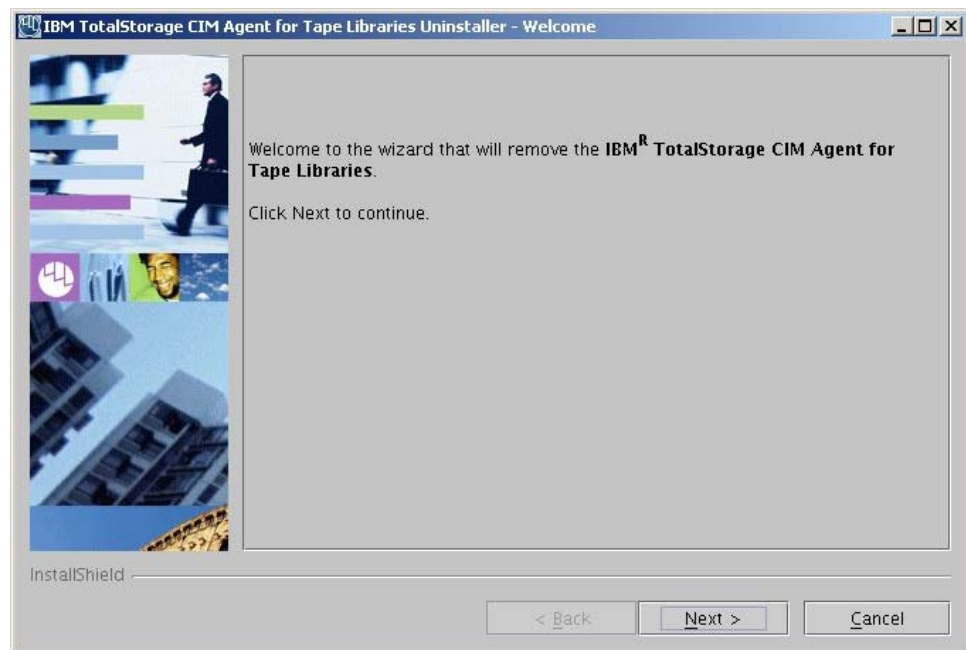

Figure 9. Uninstall Welcome

4. The **Uninstall Preview** window opens (see Figure 10 on page 16). The removal program displays a summary panel of the disk location of SMI-S Agent for Tape Libraries.
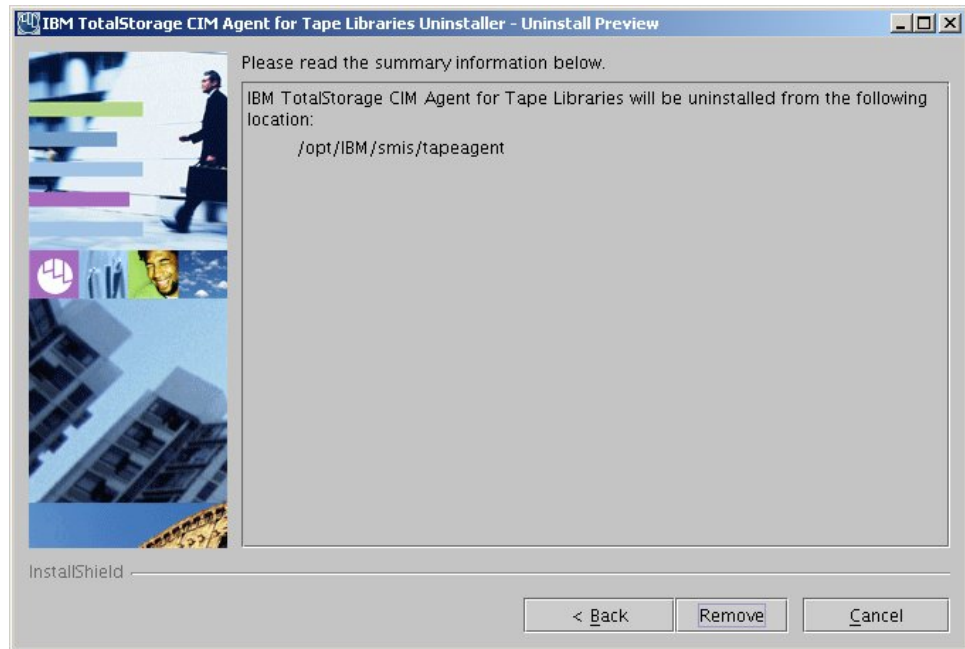
Figure 10. Uninstall Preview

>   Click **Remove** to continue or click **Cancel** to stop the removal of the SMI-S
>   Agent for Tape. Click **Back** to return to the previous window.

5. The **Uninstall Progress** window opens (see Figure 11). Wait for the program to
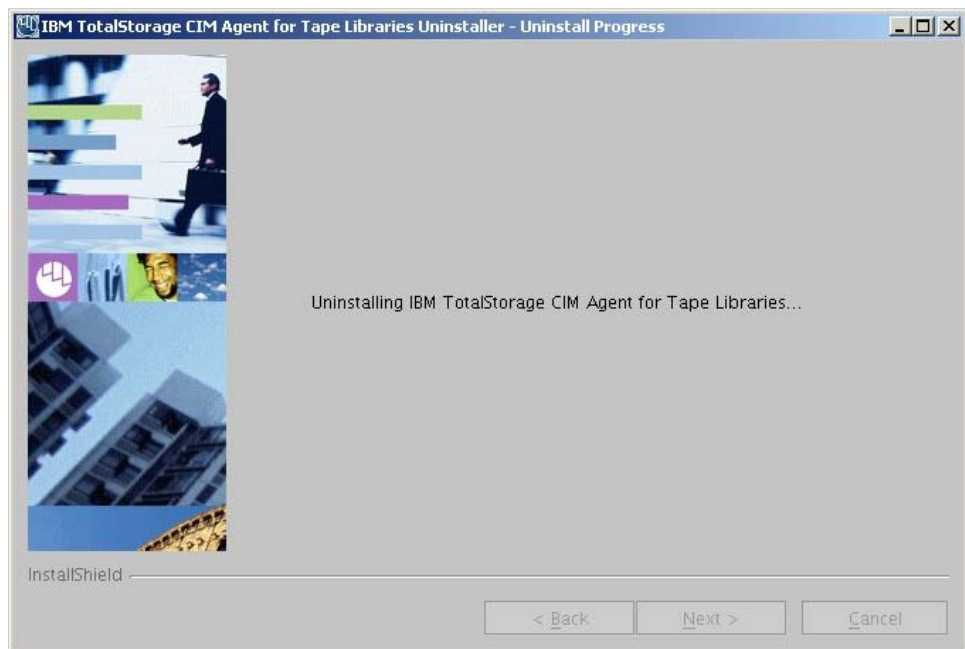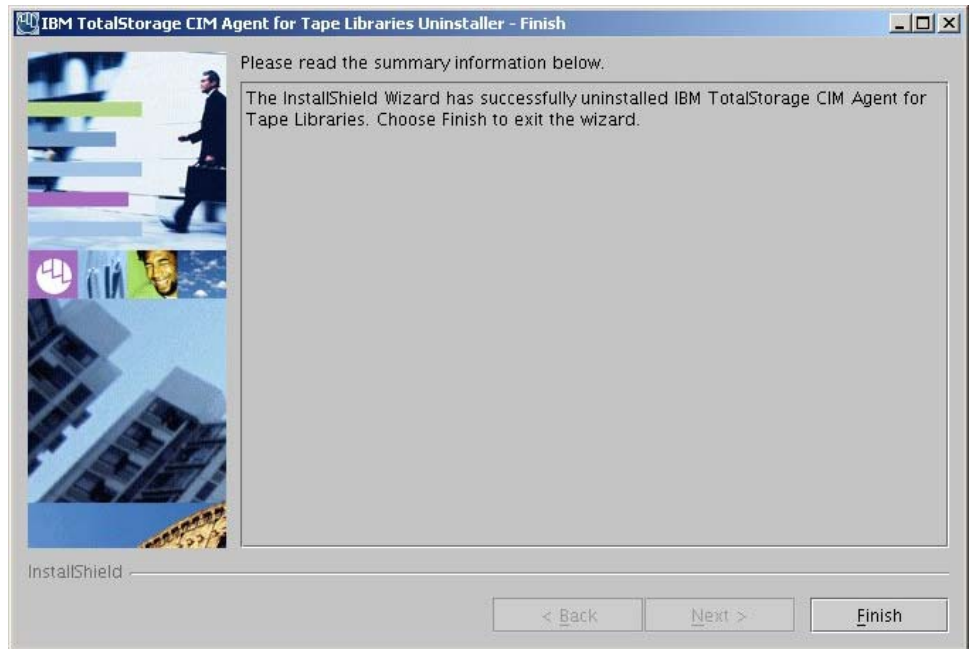   remove the SMI-S Agent for Tape.

Figure 11. Uninstall Progress

6. The **Finish** window of the uninstallation wizard opens (see Figure 12 on page
    17). This window indicates the result of the removal process (successful or
    failed). Click **Finish** to complete the removal process and exit the wizard.

Figure 12. Uninstall Finish

Result

If the Finish window for the Uninstaller program opens and the result of the removal process is successful, the SMI-S Agent for Tape Libraries was removed from your Linux system.

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.

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 PUBLICATIONS "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.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurement may have been

estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

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.

Terms and conditions for downloading and printing publications

Permissions for the use of the information you have selected for download are granted subject to the following terms and conditions and your indication of acceptance thereof.

Personal Use: You may reproduce this information for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative works of this information, or any portion thereof, without the express consent of the manufacturer.

Commercial Use: You may reproduce, distribute and display this information solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of this information, or reproduce, distribute or display this information or any portion thereof outside your enterprise, without the express consent of the manufacturer.

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the information or any data, software or other intellectual property contained therein.

The manufacturer reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the information is detrimental to its interest or, as determined by the manufacturer, the above instructions are not properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations. THE MANUFACTURER MAKES NO GUARANTEE ABOUT THE CONTENT OF THIS INFORMATION. THE INFORMATION IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

All material copyrighted by IBM Corporation.

By downloading or printing information from this site, you have indicated your agreement with these terms and conditions.

Trademarks

The following terms are trademarks of the International Business Machines Corporation in the United States, other countries, or both:

- AIX
- DB2
- DFSMS/MVS
- DFSMS/VM
- e (logo)
- Enterprise Storage Server
- ES/9000
- ESCON
- FICON
- FlashCopy
- HACMP
- IBM
- Intellistation
- MVS/ESA
- Netfinity
- NetVista
- Operating System/400
- OS/400
- RS/6000
- S/390
- Seascape
- SNAP/SHOT
- SP
- System/390
- TotalStorage
- Versatile Storage Server
- Virtualization Engine
- VSE/ESA
- z/Architecture
- z/OS
- z/VM
- zSeries

Microsoft, Windows, and Windows NT are trademarks of Microsoft Corporation in the United States, other countries, or both.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

Java Compatibility logo

The Java Compatibility logo identifies products that incorporate a Java application environment (JDK or JRE). These products pass the applicable, JavaSoft defined, Java Compatibility test suite in order to enable execution of Java or Personal Java (pJava) applications.

Index

C

configuration
   Linux   15

I

installation
   Linux
      graphical mode   1, 3
   verifying on Linux   9

L

Linux
   configuring   13
   configuring SMI-S agent   15
   installation
      graphical mode   1, 3
   installing the SMI-S agent in graphical
     mode   1, 3
   verifying installation   9

S

SMI-S agent
   configuration on Linux   15
   configuring   13
   installing on Linux in graphical
     mode   1, 3
   verifying installation on Linux   9

T

Trademarks   21

V

verifying installation
   Linux   9

Readers' Comments — We'd Like to Hear from You

IBM TotalStorage
SMI-S Agent for Tape on Linux Systems Installation Guide

Publication No. GC35-0512-00

Overall, how satisfied are you with the information in this book?

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Overall satisfaction	☐	☐	☐	☐	☐

How satisfied are you that the information in this book is:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Accurate	☐	☐	☐	☐	☐
Complete	☐	☐	☐	☐	☐
Easy to find	☐	☐	☐	☐	☐
Easy to understand	☐	☐	☐	☐	☐
Well organized	☐	☐	☐	☐	☐
Applicable to your tasks	☐	☐	☐	☐	☐

Please tell us how we can improve this book:

Thank you for your responses. May we contact you?   ☐ Yes   ☐ No

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.
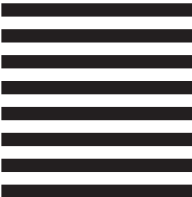
Name

Address

Company or Organization

Phone No.

NO POSTAGE
NECESSARY
IF MAILED IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL   PERMIT NO. 40   ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

International Business Machines Corporation
Information Development
Department 61C
9032 South Rita Road
Tucson, AZ 85775-4401

IBM ®

Printed in USA

Spine information:

IBM TotalStorage

SMI-S Agent for Tape on Linux Systems Installation Guide

IBM