Tivoli Storage Manager for Windows

Version 5.3

Installation Guide

GC32-1602-01

Tivoli® Storage Manager for Windows

IBM

Version 5.3

Installation Guide

GC32-1602-01

Note

Before using this information and the product it supports, read the general information in Appendix C, "Notices," on page 37.

Second Edition (October 2005)

This edition applies to Version 5 Release 3 of IBM Tivoli Storage Manager for Windows (program numbers 5608-ISM, 5608-ISX, 5608-SAN) and to any subsequent releases until otherwise indicated in new editions.

Changes since the December 2004 edition are marked with a vertical bar (|) in the left margin. Ensure that you are using the correct edition for the level of the product.

Order publications through your IBM sales representative or the branch office that serves your locality.

Your comments are important to help us provide the most accurate, quality information. If you have comments about this manual or any other IBM Tivoli Storage Manager manual, please see "Support Information" on page vii.

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Before You Begin

This publication helps you install and configure IBM Tivoli Storage Manager.

Before using this publication, you should be familiar with:
- Windows operating systems
- Workstation operating systems on which the clients reside
- Communication protocols installed on your client and server machines

Technical Changes

This section summarizes only those changes that affect installation.

The Administrative Web interface is being replaced in this release with the Administration Center. The Administration Center is a Web-based interface that can be used to centrally configure and manage Tivoli Storage Manager Version 5.3 servers. The Administration Center is the only Web interface that can be used to administer Version 5.3 or later servers. The old administrative Web interface cannot be used with Version 5.3 or later servers.

There might be new defaults set in your server options files. If you have not specified the affected options in the options files, then the new defaults will take effect immediately. If you have specified some of the options, the value they have already specified will be used and the default change will have no effect. If you want the new default to be used, you will have to change the settings.

If you install a new version of Tivoli Storage Manager over an existing version, and have NOT specified the affected option, then the new Version 5.3 defaults will be used. If you have specified values in the affected options, then installing a newer version of Tivoli Storage Manager will not override your specified values with the new defaults.

The new defaults are:
- DEFINE DEVCLASS – FILE: Defaults for mountlimit and maxcapacity parameters changed.
- DEFINE STGPOOL:
  - Primary Sequential Access - Default value for collocate changed to GROUP.
  - Copy Sequential Access - Default value for collocate will be left at NONE.
- MOVE DATA: Default for reconstruct changed.
- MOVE NODEDATA Default for reconstruct changed.

Accessibility Features

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully. These are the major accessibility features of Tivoli Storage Manager:
- Server and client command-line interfaces provide comprehensive control of Tivoli Storage Manager using a keyboard.
- The Windows® client-graphical interface can be navigated and operated using a keyboard.

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- The Web backup-archive client interface is HTML 4.0 compliant, and accessibility is limited only by the choice of Internet browser.
- All user documentation is provided in HTML and PDF format. Descriptive text is provided for all documentation images.
- The Tivoli Storage Manager Console follows Microsoft® conventions for all keyboard navigation and access. Drag and Drop support is handled using the Microsoft Windows Accessibility option known as MouseKeys. For more information about MouseKeys and other Windows accessibility options, please refer to the Windows Online Help (keyword: MouseKeys).

IBM Tivoli Storage Manager Publications

This section lists publications in the IBM Tivoli Storage Manager library and related documents. It also describes how to access Tivoli publications online and how to order Tivoli publications.

IBM Tivoli Storage Manager Publications

The following table lists Tivoli Storage Manager server publications.

Publication Title	Order Number
IBM Tivoli Storage Management Products License Information	GH09-4572
IBM Tivoli Storage Manager Messages	SC32-9090
IBM Tivoli Storage Manager for Windows Administrator's Guide	GC32-0782
IBM Tivoli Storage Manager for Windows Administrator's Reference	GC32-0783
IBM Tivoli Storage Manager for Windows Installation Guide	GC32-1602
IBM Tivoli Storage Manager Basic Concepts Poster	SC32-9464

Accessing Publications Online

The product CD contains the publications that are in the product library. The format of the publications is PDF, HTML, or both. To access the publications using a Web browser, open the infocenter.html file. The file is in the appropriate publications directory on the product CD.

IBM® posts publications for this and all other Tivoli® products, as they become available and whenever they are updated, to the Tivoli software information center Web site at the following Web address:

http://publib.boulder.ibm.com/tividd/td/tdprodlist.html

In the Tivoli Technical Product Documents Alphabetical Listing window, scroll down to the <**S**> section. Click the appropriate <**IBM Tivoli Storage Manager**> product link.

Note: If you print PDF documents on other than letter-sized paper, set the option in the **File → Print** window that allows Adobe Reader to print letter-sized pages on your local paper.

Ordering Publications

You can order many Tivoli publications online at the following Web site:

http://\www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi

You can also order by telephone by calling one of these numbers:

- In the United States: 800-879-2755
- In Canada: 800-426-4968

In other countries, see the following Web site for a list of telephone numbers:

http://www.ibm.com/software/tivoli/order-lit/

Tivoli Technical Training

For Tivoli technical training information, refer to the following IBM Tivoli Education Web site:

http://www.ibm.com/software/tivoli/education

Support Information

This section describes the following options for obtaining support for IBM products:

- "Searching knowledge bases"
- "Obtaining fixes" on page viii

Searching knowledge bases

If you have a problem with your IBM software, begin by searching the available knowledge bases to determine whether the resolution to your problem is already documented.

Search the information center on your local system or network

IBM Tivoli Storage Manager provides an information center on a CD. You can run the information center from the CD, or copy it to your local computer or an intranet server. You can use the search function of this information center to query conceptual information, instructions for completing tasks, reference information, and support documents.

Search the Internet

If you cannot find an answer to your question in the information center, search the Internet for the latest, most complete information that might help you resolve your problem. To search multiple Internet resources for your product, go to the support web site for the product: www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html and look for the section to search the support knowledge base. From this section, you can search a variety of resources including:

- IBM technotes
- IBM downloads
- IBM Redbooks
- Forums and newsgroups

Obtaining fixes

A product fix might be available to resolve your problem. You can determine what fixes are available for your IBM software product by checking the product support Web site:

1. Go to the IBM Software Support Web site (http://www.ibm.com/software/support).
2. Under **Products A - Z**, select your product name. This opens a product-specific support site.
3. Under **Self help**, follow the link to **All Updates**, where you will find a list of fixes, fix packs, and other service updates for your product. For tips on refining your search, click Search tips.
4. Click the name of a fix to read the description and optionally download the fix.

To receive weekly e-mail notifications about fixes and other news about IBM products, follow these steps:

1. From the support page for any IBM product, click **My support** in the upper-right corner of the page.
2. If you have already registered, skip to the next step. If you have not registered, click register in the upper-right corner of the support page to establish your user ID and password.
3. Sign in to **My support**.
4. On the My support page, click **Edit profiles** in the left navigation pane, and scroll to **Select Mail Preferences**. Select a product family and check the appropriate boxes for the type of information you want.
5. Click **Submit**.
6. For e-mail notification for other products, repeat Steps 4 and 5.

For more information about types of fixes, see the *Software Support Handbook* (http://techsupport.services.ibm.com/guides/handbook.html).

Chapter 1. Installing IBM Tivoli Storage Manager

This chapter describes the following:

- "What You Should Know First"
- "System Requirements"
- "Capacity Planning" on page 2
- "Installable Components" on page 3
- "Evaluation (Try and Buy) Product" on page 5
- "Tivoli Storage Manager Documentation" on page 5
- "Language Support" on page 6
- "Migrating to Tivoli Storage Manager Version 5.3" on page 7
- "Installing Tivoli Storage Manager" on page 9
- "Setting Client/Server Communications Options" on page 15

What You Should Know First

Before installing IBM Tivoli Storage Manager, you should be familiar with:

- The Windows operating system running on the Tivoli Storage Manager server machine.
- The operating systems running on any Tivoli Storage Manager client machines.
- Storage devices that will be available to Tivoli Storage Manager.
- Communication protocols installed on your client and server machines.
- Any special system configurations you plan to use, such as Microsoft Active Directory or Microsoft Cluster Server (MSCS).

System Requirements

Table 1 on page 2 describes the minimum system requirements for Tivoli Storage Manager Version 5.3.

Notes:

1. The Windows system functions, such as Device Manager, are supported on the 64-bit Tivoli Storage Manager Console. Normal Windows system functions are available for both the 32-bit and 64-bit server using the Manage Computer function of the Windows system.
2. The 32bit Tivoli Storage Manager Windows server is not supported on Windows 2003 x64.
3. An upgrade path from Tivoli Storage Manager 64bit to Tivoli Storage Manager x64bit is not supported. See the "Performing a Migrate Installation from Previous Versions of Tivoli Storage Manager" on page 8 section for more details.

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Table 1. Tivoli Storage Manager minimum system requirements

Tivoli Storage Manager Element	Minimum system requirements
Operating System	One of the following: Microsoft Windows Server 2003 : Standard, Enterprise, or and Datacenter Edition 32-bit Microsoft Windows Server 2003 : Enterprise or Datacenter Edition 64-bit Microsoft Windows 2000 Professional: Server, Advanced Server, or Datacenter Server Microsoft Windows Server 2003 : Enterprise with SP1 (32-bit) Microsoft Windows Server 2003 : Enterprise x64 Edition (64-bit) Microsoft Windows Server 2003 : x64 (64-bit)
Web Browser	A Web browser to log in and use the console. The Web browser can be installed on the same or a separate system. The following browsers are supported: Microsoft Internet Explorer 6.x (Windows systems only), Mozilla 1.0.2, Mozilla 1.3 (Mozilla has published some fixes that you might need to run on AIX® systems.), and Mozilla 1.4, Netscape 6.2 and Netscape 7. Your browser must support the server code page. If your browser does not support the server code page, the panels may be unreadable. If your browser meets these requirements but does not correctly display a Tivoli Storage Manager Web-based interface, consider trying a different browser.
Machine	Intel® Pentium® compatible processor or multi-processor based computer
Disk Space	At least 110 MB of free disk storage (for a typical installation)
Memory	128 MB (256 MB is recommended)
Communication Protocol	At least one of the following (installed by default with the current Windows operating systems): • Named Pipes • TCP/IP

!

For the latest updates on requirements, supported devices, client code, and fixes, go to the Tivoli Storage Manager website at:

www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html

After you have installed Tivoli Storage Manager and before you customize it for your use, go to the Tivoli Storage Manager website. Download and apply any applicable fixes.

Capacity Planning

Planning for Tivoli Storage Manager includes determining the number of client nodes to be managed by the Tivoli Storage Manager server, the backup and recovery needs of those clients, and the number and general size of client data files. There are other factors that should also be considered.

IBM publishes a useful guide called *Getting Started with Tivoli Storage Manager: Implementation Guide* (SG24-5416). This publication, which provides planning worksheets, instructions, and sample administrative macros and scripts, is available from the IBM Redbooks™ website at *www.ibm.com/redbooks/*

Tivoli Storage Manager Installation CDs

These are the CDs you need in order to install Tivoli Storage Manager and the Administration Center.

Table 2. Installation CDs

CD Number	CD Title
LCD7-0425-05	IBM Tivoli Storage Manager Windows server Version 5.3
LK4T-0345-02	IBM Tivoli Storage Manager Integrated Solutions Console Version 5.1 Windows for use with the Tivoli Storage Manager Administration Center Version 5.3
LK4T-0356-02	Tivoli Storage Manager Administration Center Version 5.3
LCD7-0507-03	IBM Tivoli Storage Manager Desktop Clients Version 5.3
LCD7-0578-02*	IBM Tivoli Storage Manager Operational Reporting Version 5.3 (* usually installed by default on the Windows Server CD). See Table 3 on page 4 for details.

Installable Components

It is not possible to install the Tivoli Storage Manager server and the storage agent on the same machine on the Windows platform.

The Tivoli Storage Manager server CD browser allows you to install the following components on the Tivoli Storage Manager server machine:

- Tivoli Storage Manager server
- Tivoli Storage Manager licenses
- Tivoli Storage Manager language packs
- Tivoli Storage Manager backup-archive client
- Tivoli Storage Manager device driver
- Tivoli Storage Manager open database connectivity (ODBC) driver
- Tivoli Storage Manager operational reporting
- Tivoli Storage Manager SANergy®

The following components are on their own CDs:

- Tivoli Storage Manager Administration Center
- Tivoli Storage Manager Integrated Solutions Console

Table 3 on page 4 describes all installable components.

Table 3. Tivoli Storage Manager installable components

Tivoli Storage Manager Component:	Description:	Additional Information:
Server (REQUIRED)	Includes the Tivoli Storage Manager database and tools to help you configure and manage Tivoli Storage Manager.	Refer to *Tivoli Storage Manager Server Overview* in the *Administrator's Guide*.
Licenses (REQUIRED)	Includes support for all Tivoli Storage Manager licensed features. After you install this package, you must configure the licenses you have purchased.	Refer to the chapter on managing server operations in the *Administrator's Guide* (See "Tivoli Storage Manager Documentation" on page 5 to access this publication).
Language Pack (OPTIONAL)	Each language pack (one for each language, 9 total) contains language- specific information for the server and the management console.	Refer to "Language Support" on page 6.
Device Driver (RECOMMENDED)	The Tivoli Storage Manager device driver extends Tivoli Storage Manager media management capability.	The Tivoli Storage Manager device driver is generally preferred for use with the Tivoli Storage Manager server. It is required for use with automated library devices and optical disk devices, unless you are using Windows Removable Storage Manager to manage media. Refer to the chapter on adding devices in the *Administrator's Guide* (See "Tivoli Storage Manager Documentation" on page 5 to access this publication). A list of devices supported by this driver is available from the Tivoli Storage Manager website, at www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html
Backup-Archive Client (RECOMMENDED)	Backup-archive client code transfers data to, and receives data from, the Tivoli Storage Manager server component.	Even if you are not planning to use Tivoli Storage Manager to back up the local machine, installing the client code locally assists in validating your server configuration. Refer to Tivoli Storage Manager Client Overview in the *Administrator's Guide*.
Integrated Solutions Console (RECOMMENDED)	The Integrated Solutions Console allows you to install components provided by IBM applications, and access them from a single interface.	The Administration Center is installed as an Integrated Solutions Console component.
Administration Center (RECOMMENDED)	The Administration Center is a Web-based interface that can be used to centrally configure and manage Tivoli Storage Manager Version 5.3 servers.	The Administration Center can only be used to administer Version 5.3 or later servers. The Administration Center provides wizards to help guide you through common configuration tasks. The properties notebook allows you to modify settings and perform advanced management tasks.

Table 3. Tivoli Storage Manager installable components (continued)

Tivoli Storage Manager Component:	Description:	Additional Information:
ODBC Driver (OPTIONAL)	Provides an interface that reporting applications can use to access the Tivoli Storage Manager database.	For configuration instructions, refer to the documentation for your reporting application.
Operational Reporting (Usually installed by default with the Tivoli Storage Manager server)	Uses automation and proactive notification to keep Tivoli Storage Manager running smoothly.	IBM Tivoli Storage Manager operational reporting is • Automatically installed by default as part of the Tivoli Storage Manager management console included when the Tivoli Storage Manager server or storage agent packages are installed. • Available as a stand-alone package on a separate CD as an independent component. Use this package if you do not run Windows Tivoli Storage Manager servers or storage agents, and do not anticipate doing so in future. The stand-alone package will not be allowed to install on a machine where the Tivoli Storage Manager server or storage agent is installed, and vice-versa. If you install the stand-alone version and later decide to install the Tivoli Storage Manager server on Windows, you must first uninstall the stand-alone console. For further information, see *Operational Reporting* in the *Administrator's Guide*.

Evaluation (Try and Buy) Product

A 60-day evaluation (try and buy) version of Tivoli Storage Manager is available on CD via internal order. The try and buy version provides the same features as the standard licensed product. However, the license package is not included, and you are limited to 50 clients.

The installation instructions provided in "Installing Tivoli Storage Manager" on page 9 apply to both the standard licensed product and the CD try and buy product.

Note: You can apply maintenance to a try and buy version of Tivoli Storage Manager.

To upgrade the try and buy version, install the license package from the standard licensed product CD. Refer to "Installing Tivoli Storage Manager Licenses (Required)" on page 12. After installing the license package, configure the licenses you have purchased.

Tivoli Storage Manager Documentation

The following resources are available to help you install, configure, and manage your Tivoli Storage Manager system:

Publications

The complete Tivoli Storage Manager product package includes a CD containing client and server publications, as well as hardcopy versions of *Installation Guide* manuals.

Information on topics contained in Windows server and client publications can be accessed in the Information Center. Select the **Library** link at: www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html

Refer to "IBM Tivoli Storage Manager Publications" on page vi for further resources, including a complete list of Tivoli Storage Manager publications.

Online Help
The Tivoli Storage Manager Console and wizards provide extensive online help. Conceptual overviews, task instructions, and detailed context-sensitive help are available.

Language Support

American English is the default language for Tivoli Storage Manager server interface controls, console messages, and other text-based elements and the only language which is included in the base package. Additional languages can be installed by selecting the appropriate language pack install package after installing the server package.

If a Windows language version other than American English is enabled on the Tivoli Storage Manager server machine
The appropriate language pack will need to be installed. If you want to install support for any additional languages, refer to "Installing the Tivoli Storage Manager Server" on page 10.

If a Windows language version other than American English IS NOT enabled on the Tivoli Storage Manager server machine
Only support for American English will be automatically installed with the Tivoli Storage Manager server. If you want to install support for any additional languages, refer to "Installing the Tivoli Storage Manager Server" on page 10.

Tivoli Storage Manager Console Language Support
The Tivoli Storage Manager server utilities have been replaced by a Microsoft Management Console (MMC) snap-in that allows you to manage Tivoli Storage Manager Windows and non-Windows resources across your network. To use the Tivoli Storage Manager management console with Windows 2000 or higher, the Version 1.2 or higher MMC package must be installed. Tivoli Storage Manager includes only the American English version of the MMC package, which is installed automatically with the Tivoli Storage Manager server. To enable other language support for the Tivoli Storage Manager Console, you must install the appropriate language version of MMC.

Language Support Limitations

When you specify a double-byte character set (DBCS) character in the description field of a schedule, the schedule cannot be created from the scheduling wizard of the Tivoli Storage Manager Management Console. There is a restriction on the type of strings that you can use in certain supplemental information fields of Tivoli Storage Manager objects, such as schedules. To avoid any errors, do not use DBCS characters in the supplemental information fields of Tivoli Storage Manager objects. Create schedules with the Administration Center.

Extra, empty directories are created when characters that have `x5C` in their character codes are specified at server volume creation in the Server Initialization

Wizard of the Tivoli Storage Manager Management console. To avoid this problem, do not specify DBCS characters during server volume creation that have x5C in their character codes.

If you select custom install to install the Tivoli Storage Manager server into directory d:\xyz\tivoli\tsm where xyz are three DBCS characters, the Tivoli Storage Manager Management Console encounters problems. To avoid this problem, do not use DBCS characters in directory names that the Tivoli Storage Manager server uses.

Migrating to Tivoli Storage Manager Version 5.3

You can install Tivoli Storage Manager over a previous version of Tivoli Storage Manager. This is called a "migrate install."

Compatibility with Other Versions of Tivoli Storage Manager

To ensure compatibility between the server and the storage agent, check the Tivoli website at www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html for maintenance level requirements and to download the latest Fixpack level. The Tivoli Storage Manager servers for the z/OS®, AIX, HP-UX, Linux®, Sun Solaris, and Windows operating systems support LAN-free data movement.

Starting with Tivoli Storage Manager Version 5.2, the server and storage agent are no longer backwards compatible with prior releases of the server and storage agent. If you have implemented library sharing, server-to-server, enterprise configuration, or LAN-free, it is important to note that all Tivoli Storage Manager servers and storage agents must be upgraded to a compatible and supported level of Version 5.2 or later code before invoking any Version 5.2 library sharing, server-to-server, or LAN-free communication.

When upgrading multiple servers participating in library sharing to Version 5.3, the servers acting as library manager must be upgraded first to maintain compatibility among the servers acting as library clients or storage agents. When upgrading multiple servers participating in server-to-server to Version 5.3, all servers must be upgraded at the same time.

As a general rule, Tivoli Storage Manager server will normally support storage agents and library clients at the same version, release, and modification level down to the modification level minus two. When the product release changes, Tivoli Storage Manager will normally support the last two maintenance releases of the previous release. For example, a Tivoli Storage Manager Version 5.3.0 server supports storage agents and library clients at the Version 5.3.0, Version 5.2.4, and Version 5.2.3 levels. An exception to this rule is where a fix or a product enhancement requires concurrent code changes to server, storage agent, and library client.

Version 5.3 servers acting as a library manager are compatible with Version 5.2 and 5.1 servers acting as a library client. However, Version 5.3 servers acting as library clients remain incompatible with Version 5.2 and Version 5.1 servers acting as library managers. When upgrading multiple servers participating in library sharing to Version 5.3, the servers acting as library managers must be upgraded first to maintain compatibility among the servers.

Tivoli Storage Manager Version 5.3 requires any version of Tivoli Storage Manager prior to Version 5.3 to be uninstalled prior to installing Version 5.3. If you are migrating to Tivoli Storage Manager Version 5.3, consider doing the following:

- Set up a Tivoli Storage Manager Version 5.3 server on a non-production machine. This provides a way to test new function before upgrading your production database.
- Perform a full database backup. See the *Administrator's Guide* for details. Also save a copy of the volume history and device configuration files. For additional information, see the BACKUP VOLHISTORY and BACKUP DEVCONFIG commands in the *Administrator's Reference*.
- You can use the DSMSERV RESTORE DB utility to restore older versions of Tivoli Storage Manger databases where needed; this utility will perform database restores from earlier releases or versions of the product. If an error is encountered, contact IBM support to diagnose the cause of the restore database failure and resolve it if possible. Note that the database backup needs to be on a currently supported device, as IBM does not support being able to read from devices that are no longer available.
- Add about 25% additional database space. New levels of Tivoli Storage Manager incorporate support for various new functions, which will require additional database space. After the migration, when the database space has stabilized, you may be able to reduce the amount of space allocated to the database.

Note: When migrating to Tivoli Storage Manager Version 5.3, the time necessary to install the package can be considerable, depending on the number of Windows clients registered. The more Windows clients registered, the longer it will take to install the package.

Device Support

Before migrating your Tivoli Storage Manager server, ensure that the new server provides support for your current storage devices. Refer to the Device Support section of the Tivoli Storage Manager website at www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html.

Note: Users of 3570, 3590, and 3580 (Magstar®, Ultrium) tape libraries need to also install the IBMTape device driver from IBM Storage Systems Group. Install the most current driver from *ftp://ftp.software.ibm.com/storage/devdrvr/*.

Performing a Migrate Installation from Previous Versions of Tivoli Storage Manager

Installation will be stopped and an error message displayed if an active server or storage agent process is detected. All active server or storage agent processes must be halted before installation can proceed.

Before migrating the Tivoli Storage Manager server to the new release, perform some clean up by running the EXPIRE INVENTORY command. If your server is currently at a release earlier than Version 5.2, there might be additional steps you should take in preparation for migration to Version 5.3. Search the support site at www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html for more information.

You can migrate directly to Tivoli Storage Manager Version 5.3 from any previous version of Tivoli Storage Manager. The amount of time to migrate from Version 5.2 to 5.3 is negligible. The change in database size between Version 5.2 and 5.3 is also

negligible. Versions prior to 5.2 will take longer to migrate. The older the version, the longer this process will take. If migrating to Tivoli Storage Manager from any previous release, you should take actions to clean up system objects.

1. Consider whether you need to install any operating system patches or a new operating system level before installing the latest Tivoli Storage Manager server.
2. Back up critical server information by using the BACKUP DB, BACKUP DEVCONFIG, and BACKUP VOLHIST commands. For example, the following command backs up device configuration information to files that you have identified in the dsmserv.opt file, with the DEVCONFIG option. You can instead specify file names with this command.

   ```
   backup db type=full devclass=tape_device
   backup devconfig
   ```

   The following command backs up volume history information to files that you have identified in the dsmserv.opt file, with the VOLUMEHISTORY option. You can instead specify file names with this command.

   ```
   backup volhistory
   ```

   If you need to revert to a previous release, you will have to restore from this database backup.
3. Save the following important files, which are in the default directory for the Tivoli Storage Manager server:

   volhist (file name depends on what you specified with the backup volhistory command)
   devconfig (file name depends on what you specified with the backup devconfig command)
   dsmserv.opt
   dsmserv.dsk
4. Ensure that no tapes are mounted. Use the QUERY MOUNT command.
5. Ensure that no Tivoli Storage Manager processes are running. Use the QUERY PROCESS command. Cancel processes if needed, by using CANCEL PROCESS *PROCESSNUMBER*. Installation stops if any Tivoli Storage Manager processes are running.
6. Stop the server if it is running by entering:

   ```
   halt
   ```
7. Write down the directory path of your current Tivoli Storage Manager server.
8. Use the Windows **Add/Remove Programs** dialog to uninstall the current Tivoli Storage Manager server.
9. Verify that all Tivoli Storage Manager code is removed from the machine.
10. Manually delete the ADSMLICN.DLL file. This file is installed by default in the directory C:\Program Files\Tivoli\tsm\console.
11. Install the latest Tivoli Storage Manager server software (see "Installing the Tivoli Storage Manager Server" on page 10).
12. Verify that the installation was successful by starting the server.

    ```
    ./dsmserv
    ```

Installing Tivoli Storage Manager

This section provides instructions for installing the Tivoli Storage Manager server and related components. Installing the server consists of the following tasks:

1. Installing the Tivoli Storage Manager server and related components on the server machine.

2. Installing Tivoli Storage Manager client code on every machine that will transfer data to Tivoli Storage Manager server-managed storage.

Tivoli Storage Manager client code for UNIX® and desktop clients is available on separate CDs included in the product package. For detailed Tivoli Storage Manager client installation and configuration instructions, see the *Backup-Archive Clients Installation and User's Guide*.

Tivoli Storage Manager server maintenance releases, client software, and publications are also available from the Tivoli Storage Manager website at *www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html*.

IBM Tivoli Storage Manager Installation Steps

See "Installable Components" on page 3 for Tivoli Storage Manager component descriptions and installation recommendations. Before starting the installation procedure, ensure that you are logged on to Windows with a user name having administrator authority.

Note: Tivoli Storage Manager provides a minimal configuration option, which includes a quick-installation procedure. Refer to Appendix A, "Performing a Minimal Configuration," on page 27 for more information.

Installing the Tivoli Storage Manager Server

Prior to starting the installation wizard, ensure that you have the following information:

- For Customer Information registration, you must provide all user names used on this server.

Installation of Tivoli Storage Manager will be stopped if an active server or storage agent process is detected, and an error message displayed. All active sever or storage agent processes must be halted before installation can proceed.

Note: If you plan to configure IBM Tivoli Storage Manager in a Windows server cluster, see *Configuring and Managing Clusters* in the *Administrator's Guide* before you install the Tivoli Storage Manager server on the cluster node machines.

When you install or upgrade the server to IBM Tivoli Storage Manager Version 5.3, you must give your servers unique names. If all of your servers have the default name, SERVER1, you will only be able to add one of them to the Administration Center. Use the SET™ SERVERNAME command to specify the new server name. The maximum length of the name is 64 characters. For example, to name the server WELLS_DESIGN_DEPT:

```
set servername wells_design_dept
```

See the *Administrator's Reference* for more details on this command.

Installing in this recommended install sequence will minimize the need to restart your computer:

1. Tivoli Storage Manager server
2. Tivoli Storage Manager licenses
3. Tivoli Storage Manager language packs

4. Tivoli Storage Manager device driver, or the IBMTape device driver (for IBM Magstar and Ultrium devices)
5. Tivoli Storage Manager Integrated Solutions Console
6. Tivoli Storage Manager Administration Center

To install the Tivoli Storage Manager server, do the following:

1. Insert the Tivoli Storage Manager Windows Server CD. If autorun is on, the CD browser screen will appear. If autorun is off, use Windows Explorer to go to the CD drive, double-click the CD, and then double-click setup.exe.
2. The Tivoli Storage Manager Server CD browser screen appears.
3. The **Choose Demonstration Language** dialog appears.
4. Accept the default or select a language for the Tivoli Storage Manager installation dialogs and click **OK**.

   Notes:

   a. This selection only specifies a language for the Tivoli Storage Manager installation dialogs. Full product language support can be specified by selecting the **Custom** installation option later in this installation sequence.
   b. Click **View Release Notes** to open the "readme" file for this Tivoli Storage Manager release. This file contains the most current product information, including any installation or configuration instructions not covered by Tivoli Storage Manager publications.

   The **Tivoli Storage Manager Server Main Menu** appears.
5. Click **Install Products**.

   The **Install Products** dialog appears. See "Installable Components" on page 3 for component descriptions and installation recommendations.
6. Click **TSM Server**.

   The **Welcome to InstallShield Installation Wizard for IBM Tivoli Storage Manager** appears. Click **Next**.
7. The **License Agreement** appears. Accept it, and Click **Next**.
8. The **Customer Information** dialog appears. Fill it in, and click **Next**.
9. The **Setup Type** dialog appears. Select **Complete** or **Custom** and click **Next**.

   Note: Custom installation allows you to deselect other Tivoli Storage Manager components.
10. **If you select Complete:** the **Ready to Install the Program** window appears.
11. Click **Install**.

    A progress indicator appears. After the installation completes, the **InstallShield Wizard Completed** dialog appears.
12. Click **Finish**.

    You do not need to restart your computer if you are continuing to install other Tivoli Storage Manager components.

    Note: If you plan to install any other Tivoli Storage Manager components locally, return to the CD browser **Install Products** panel to complete those installations. See "Installable Components" on page 3 for component descriptions and installation recommendations. Installation instructions for the remaining Tivoli Storage Manager components are provided in the following sections:

    - "Installing Tivoli Storage Manager Licenses (Required)" on page 12

- "Installing the Tivoli Storage Manager Device Driver (Recommended)"
- "Installing the Tivoli Storage Manager Backup-Archive Client Locally" on page 13
- "Installing Operational Reporting (Special Case as Stand-Alone)" on page 14

The following components are on separate CDs:

- Tivoli Storage Manager Administration Center
- Tivoli Storage Manager Integrated Solutions Console

Installing Multiple Tivoli Storage Manager Servers on a Single Machine: In most cases, only one Tivoli Storage Manager server instance is required on the Tivoli Storage Manager server machine. You might want to install a second instance if you are configuring in a cluster. You might also want to run more than one server on a large machine if you have multiple tape libraries or a disk-only configuration. After you install and configure the first Tivoli Storage Manager server, use the Server Initialization wizard to create additional Tivoli Storage Manager server instances on the same machine (see *Server Initialization Wizard* in the *Administrator's Guide* for details).

Installing Tivoli Storage Manager Licenses (Required)

See "Installable Components" on page 3 for a description of the Tivoli Storage Manager license package. To install the Tivoli Storage Manager license package from the CD browser **Install Products** dialog, do the following:

1. Click **Tivoli Storage Manager Server Licenses**.
2. The **Welcome to InstallShield Installation Wizard for IBM Tivoli Storage Manager** appears. Click **Next**.
3. The **Customer Information Panel** appears. Fill it in. Click **Next**.
4. The **Setup Type** dialog appears. Select **Complete** or **Custom** and click **Next** . If you select **custom**, you can change the path of the destination folder.
5. The **Ready to Install the Program** window appears. Click **Install**.
6. A progress indicator appears. After the installation completes, the **InstallShield Wizard Completed** dialog appears.
7. Click **Finish**.

Installing the Tivoli Storage Manager Language Packs

See "Installable Components" on page 3 for a description of the Tivoli Storage Manager language packs. To install the a Tivoli Storage Manager language pack from the CD browser **Install Products** dialog, do the following:

1. Click Tivoli Storage Manager Language Packs.
2. Select the appropriate language to install.
3. Click **Next**.
4. Click **Install**.
5. Click **Finish**.

Installing the Tivoli Storage Manager Device Driver (Recommended)

See "Installable Components" on page 3 for a description of the Tivoli Storage Manager device driver. To install the Tivoli Storage Manager device driver from the CD browser **Install Products** dialog, do the following:

1. Click **Tivoli Storage Manager Device Driver**.

2. The **Welcome to the IBM Tivoli Storage Manager Device Driver** Install Shield Wizard appears. Click **Next**.
3. The **Customer Information Panel** appears. Fill it in. Click **Next**.
4. The **Setup Type** dialog appears.
5. Select **Complete** or **Custom** and click **Next**. If you select **custom**, you can change the path of the destination folder.
6. The **Ready to Install the Program** window appears.
7. Click **Install**.

   A progress indicator appears. After the installation completes, the **InstallShield Wizard Completed** dialog appears.
8. Click **Finish**.

   A dialog, prompting you to restart your computer, appears.

   Note: If you plan to install any other Tivoli Storage Manager components locally, return to the CD browser **Install Products** panel to complete those installations before restarting your computer.

   If you do not plan to install any other Tivoli Storage Manager components locally at this time, click **YES** to immediately restart your computer.

Installing the Tivoli Storage Manager Backup-Archive Client Locally

The Tivoli Storage Manager backup-archive client is on a separate CD. You should install the Tivoli Storage Manager backup-archive client on the Tivoli Storage Manager server machine to help you validate your server configuration. See "Installable Components" on page 3 for a description of the Tivoli Storage Manager backup-archive client. For further details, see the *IBM Tivoli Storage Manager for Windows: Backup-Archive Clients Installation and User's Guide*.

To install the Tivoli Storage Manager backup-archive client:

1. Insert the Tivoli Storage Manager Desktop Clients CD into your CD drive. If you have autorun enabled, the installation dialog should start when the CD loads. If the installation dialog does not start automatically, select **Run** from the Start menu and at the prompt, type:

   ```
   x:\setup
   ```

   where **x** is your CD drive. Click **OK**.
2. Follow the instructions displayed on the screen.

Perform a Minimal Configuration

At this point, you might wish to perform a minimal configuration to quickly evaluate basic product function. To do so, perform "Configure the Tivoli Storage Manager Server" on page 28 and "Run a Test Backup" on page 28. If you are planning to set up Tivoli Storage Manager for immediate use in a production environment, follow the standard configuration process documented in *Configuring IBM Tivoli Storage Manager* in the *Administrator's Guide*.

Installing the Integrated Solutions Console and the Administration Center (Recommended)

Go to Chapter 2, "Installing the Integrated Solutions Console and the Administration Center," on page 17.

Installing Operational Reporting (Special Case as Stand-Alone)

Use the stand-alone package (on a separate CD) if you do not run Windows Tivoli Storage Manager servers or storage agents, and do not anticipate doing so in future. To install Operational Reporting:

1. Insert the Tivoli Storage Manager Operational Reporting CD into your CD drive. If you have autorun enabled, the installation dialog should start when the CD loads. If the installation dialog does not start automatically, select **Run** from the Start menu and at the prompt, type:

   ```
   x:\setup
   ```

   Where **x** is your CD drive. Click **OK**.
2. Follow the instructions displayed on the screen.

Migrating from Tivoli Storage Manager SCSI to IBM Device Driver for 3570, 3590, and IBM LTO Devices

The Tivoli Storage Manager device driver will no longer recognize IBM 3570, 3590, or IBM LTO devices. If you have an IBM 3570, 3590 or Ultrium tape library or drive, download and install the ***latest***, current IBMTape device driver from the ftp site, ftp://ftp.software.ibm.com/storage/devdrvr/ ***before*** you install IBM Tivoli Storage Manager Version 5.3. See the following table for the minimum required device driver for your operating system.

Operating System	Driver Name	Driver Level
Windows 2000	IBMMag.Win2K IBMUltrium.Win2K	5.0.4.5 5.0.4.5
Windows 2003	IBMTape.W2K3	6.0.0.4

Drivers will be available for Windows systems in the corresponding folders on the site. You will also need to download the Installation and User's Guide PDF for this device driver, located in the Doc folder. See Table 4 to determine which driver you will need to install.

Table 4. IBMTape Device Drivers for 3570, 3590, and IBM LTO Devices

Device	Library	Device Driver
IBM 3570 drive	IBM 3570 library	IBM TotalStorage® Tape Driver
IBM 3590 drive	IBM 3590 library	
IBM LTO drive	IBM LTO 3581, 3583, 3584	IBM Ultrium Driver

If you are currently using the Windows Removable Storage component (RSM) to manage your SCSI tape library devices, you may continue to do so. If you are not, you will need to disable it so that it does not conflict with Tivoli Storage Manager's use of those devices. This is a new step required for Tivoli Storage Manager, because the device driver for 3570, 3590, and IBM LTO Ultrium libraries and drives allows those devices to be claimed by both RSM and Tivoli Storage Manager.

One method is to disable RSM services:

1. From your desktop, right click **My Computer**.
2. Select **Manage**.
3. Select **Services/Applications**.
4. Select **Services**.

5. Right click on **Removable Storage** and **Select All Tasks** and then click on **Stop**.
6. Right click again on **Removable Storage** and select **Properties**.
7. Under the **General** tab, choose **Disabled** for the **Startup Type**.
8. Click **OK**.

Another method is to allow RSM to run, but selectively disable each SCSI device that it tries to manage:

1. From your desktop, right click **My Computer**.
2. Select **Manage**.
3. Select **Storage**.
4. Select **Removable Storage**.
5. Select **Physical Locations**. You will see a list of tape libraries, under which are listed the library's drives.
6. Right click each library and drive to be disbled from RSM and select its properties.
7. Uncheck the **Enable Library** or **Enable Drive** box.
8. Click **OK**.
9. Close the Computer Management Console.

When the operating system is started, the Windows device driver tries to acquire the devices it supports before the IBM Tivoli Storage Manager device driver can acquire devices.

See the *Administrator's Guide* for more information on how to select the device driver you want.

Setting Client/Server Communications Options

This section helps you to set up IBM Tivoli Storage Manager client/server communications.

Use the Server Options utility available from the Tivoli Storage Manager Console to view and specify server communications options. This utility is available from the **Service Information** view in the server tree. By default, the server uses the TCP/IP, Named Pipes, and HTTP communication methods. If you start the server console and see warning messages that a protocol could not be used by the server, either the protocol is not installed or the settings do not match the Windows protocol settings.

For a client to use a protocol that is enabled on the server, the client options file must contain corresponding values for communication options. From the Server Options utility, you can view the values for each protocol.

! This section describes setting server options *before* you start the server. When you start the server, the new options go into effect. If you modify any server options after starting the server, you must stop and restart the server to activate the updated options.

For more information about server options, see the *Administrator's Reference* or the Tivoli Storage Manager Console online help.

TCP/IP Options

Here is an example of TCP/IP setting:

```
commmethod                  tcpip
   tcpport                  1500
   tcpwindowsize            8
   tcpnodelay               no
```

Named Pipes Options

The Named Pipes communication method is ideal when running the server and client on the same Windows machine because Named Pipes support is internal to the Windows base system. Named Pipes require no special configuration. Here is an example of a Named Pipes setting:

```
commmethod                    namedpipe
     namedpipename            \\.\pipe\adsmpipe
```

SHAREDMEM Options

Specifies the shared memory communication method option. This method uses the same area of memory to send data between several applications at the same time. Both the server and the backup-archive client need to be configured to support the shared memory communication method, and they must be installed on the same machine.

SNMP DPI Subagent Options

Tivoli Storage Manager implements a simple network management protocol (SNMP) subagent. You can configure the SNMP subagent to send traps to an SNMP manager, such as NetView®, and to provide support for a management information base (MIB). For details about configuring SNMP for use with Tivoli Storage Manager, see the *Administrator's Guide*.

The subagent communicates with the **snmpd** daemon, which in turn communicates with a management application. The **snmpd** daemon must support the DPI® protocol. Agents are available on AIX. The subagent process is separate from the Tivoli Storage Manager server process, but the subagent gets its information from a server options file. When the SNMP management application is enabled, it can get information and messages from servers.

Here is an example of a SNMP setting. You must specify the COMMMETHOD option. For details about the other options, see the *Administrator's Reference*.

```
commmethod                    snmp
   snmpheartbeatinterval      5
   snmpmessagecategory        severity
```

Chapter 2. Installing the Integrated Solutions Console and the Administration Center

Prior to installing Integrated Solutions Console and the Administration Center, you must already have installed, configured, and started the Tivoli Storage Manager server. Installation of the Administration Center is a two-step process:

1. You must first install the Integrated Solutions Console Version 6.0.1.
2. Next, you can install the Administration Center into the Integrated Solutions Console.

The installation wizards for the Integrated Solutions Console and the Administration Center are on separate CDs. The Integrated Solutions Console will only be available via your regular order system such as Passport Advantage or the Advanced Administrative System (AAS). If you obtain your IBM software electronically through Passport Advantage, you must have an authorized user ID and password. If you obtain your software from a software order system such as AAS, you will need to request an MES update (miscellaneous equipment update). If you have questions regarding AAS, see your System Engineer (SE). See the Administration Center Readme for specific information. You can obtain a PDF or HTML version of the readme file from the IBM Tivoli Information Center (http://publib.boulder.ibm.com/infocenter/tivihelp/v1r1/index.jsp). After both applications are installed, you will be able to administer Tivoli Storage Manager from anywhere in your network via a web browser.

The Administration Center is also available via the normal service FTP site.

These are the CDs you need to install the Integrated Solutions Console and the Administration Center:

Table 5. Integrated Solutions Console and Administration Center Installation CDs

CD Number	CD Title
LK4T-0345-02	IBM Tivoli Storage Manager Integrated Solutions Console Version 5.1 Windows for use with the Tivoli Storage Manager Administration Center Version 5.3
LK4T-0356-02	Tivoli Storage Manager Administration Center Version 5.3

This chapter provides instructions for installing the Integrated Solutions Console and the Administration Center, including the following tasks:

Task:	Procedure:
Configure the IP Address	"Configuring the IP Address" on page 19
Overview: Install the Integrated Solutions Console and the Administration Center	"Overview: Installing the Integrated Solutions Console and the Administration Center" on page 20
Install the Integrated Solutions Console	"Installing the Integrated Solutions Console" on page 21
Install the Administration Center	"Installing the Administration Center" on page 22

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Task:	Procedure:
Upgrade the Administration Center	"Upgrading the Administration Center" on page 23
Verify your Installation	"Verify Your Installation" on page 22
Uninstall the Administration Center	"Uninstalling the Administration Center" on page 23
Uninstall the Integrated Solutions Console	"Uninstalling the Integrated Solutions Console" on page 24
Manually Uninstall the Integrated Solutions Console	"Manually Uninstalling the Integrated Solutions Console" on page 24

Note: For setting up the secure sockets layer (SSL) procedure, see the *Administrator's Guide* appendix.

System Requirements

Check this website for the latest platform support updates:

`www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManagerVersionRelease.htm`

Search for **Administration Center** to find the Administration Center system requirements.

The Tivoli Storage Manager server can require a large amount of memory, network bandwidth, and processor resources. In many cases, the server performs best when other applications are not installed on the same system. If the system meets the combined requirements for the server and the Administration Center (for example, it has at least 2 GB of physical memory), it can support both applications. However, if you plan to use the Administration Center to manage an environment with a large number of servers or administrators, consider installing the Administration Center on a separate system.

An operating system which meets the systems requirements given below must be installed on the machine before you can install the Administration Center and Integrated Solutions Console. Ensure that your system meets the prerequisites for the type of installation you will perform. The memory needed for the Administration Center is additional memory beyond what is needed for the operating system and your existing applications.

- **Windows server** (32-bit Intel)
  - Operating system:
    - Windows 2000 Professional with SP4
    - Windows 2000 Server with SP4
    - Windows 2000 Advanced Server with SP4
    - Windows Server 2003 Standard Edition
    - Windows Server 2003 Enterprise Edition
    - Windows 2003 Datacenter
    - Windows XP Professional with SP1
  - Processor: CPU speeds of late model, mid-range to high-end servers are recommended (Pentium 800 MHz or equivalent at a minimum). Production environments should consider the Pentium 4 processor at 1.4GHz or higher.
  - File system: NTFS file system is recommended.

Note: Because the installation program does not check cluster sizes on a file system, install on an NTFS file system to ensure that you have enough disk space. If you intend to install on a FAT file system, make sure that you have enough disk space before installation. For more information, refer to the Microsoft support website, and search for content about default cluster sizes for FAT file systems.

- **Web Browsers**

  You need a Web browser to log in and use the Integrated Solutions Console. The Web browser can be installed on the same system or a separate system. The following browsers can be used:

  – Microsoft Internet Explorer 6.x (Windows systems only) or later with Java Plug-in 1.4.1.

  – Mozilla 1.6 or later.

- **Static IP Address**

  The host system must be configured to use a static IP address. See "Configuring the IP Address."

- **Physical memory:** 512 MB minimum; 1 GB or more recommended for runtime installations.

- **Disk space:** To install the console on a system for the first time and use the WebSphere® Application Server that is embedded in the Administration Center, you need:

  – 650 MB to satisfy the installation program disk space check.

  – An additional 75 MB in the temp directory (which is also checked during the installation).

  – 505 MB for the installation media location.

- **Virtual memory/swap space:** Double your physical memory. At a minimum, this should be at least equal to your physical memory.

- **Network connectivity:** To use the Administration Center across a network, the following items are required for the Administration Center machine:

  – A network adapter and connection to a physical network that can carry IP packets (for example, Ethernet, Token Ring, and ATM).

  – A static IP address.

  – A configured, fully-qualified host name. Administration Center must be able to resolve an IP address from its fully-qualified host name. To verify that the host name is configured correctly, issue the ping command from a command line. For example:

  ```
  ping hostname.yourco.com
  ```

  where *hostname.yourco.com* is the fully-qualified host name.

- **Defaults**

  – iscadmin – The default Integrated Solutions Console ID. You will also specify a password for this ID.

  – 8421 – The default Web administration port (HTTP).

  – 8422 – The default secure Web administration port (HTTPS).

Configuring the IP Address

The Administration Center assumes that the host system is using a static IP address instead of a dynamically assigned IP address. A static IP address is necessary because the Administration Center server must be listed on the domain name servers, which map the host name to the physical address of the system.

On a system that is not connected to the network, you must configure your system so that the IP loopback port is mapped to the fully-qualified host name. To enable that mapping, perform the following procedure.

1. Go to the system where the Administration Center will be installed.
2. Locate the TCP/IP host file on your system.
   - Look in the path \system32\drivers\etc.
3. Use a text editor to open the host file.
4. At the end of the host file, add lines similar to the following:

   ```
   127.0.0.1      localhost
   127.0.0.1      your.server.name
   ```

   where your.server.name is the fully-qualified host name for the Administration Center system.
5. Save the host file.

Overview: Installing the Integrated Solutions Console and the Administration Center

The time to install the Integrated Solutions Console varies depending on the speed of your processor and the memory in your machine. For example, if you have a 3.2 GHz processor with 2 GB of memory running on Windows 2003, it will take 8 minutes for a new installation of the Integrated Solutions Console and an additional 3 minutes for the Administration Center. For more configuration examples, see the README file.

Basic steps for setting up the Integrated Solutions Console and the Administration Center:

1. Install and start your Tivoli Storage Manager Version 5.3 servers. Give each server a unique name.
2. Use the Integrated Solutions Console CD or eGA image to install the Integrated Solutions Console. During the installation process, create an Integrated Solutions user ID and password.
3. Use the Administration Center CD or eGA image to install the Administration Center, on the same system as the Integrated Solutions Console. The Administration Center (along with the Integrated Solutions Console) can be installed on the same system as a Tivoli Storage Manager server if the system meets the combined requirements for both applications (at least 2 GB). However, if you plan to use the Administration Center to manage an environment with a large number of servers or administrators, consider installing the Administration Center on a separate system.
4. Log onto the Integrated Solutions Console using a Web browser. You will be able to administer Tivoli Storage Manager from a browser anywhere in your network.
5. Add connections for the Tivoli Storage Manager servers you want to manage.
6. The default Integrated Solutions Console ID is iscadmin. You must specify a password for this ID. You can create additional Integrated Solutions Console user IDs and passwords for any other administrators who will access the Administration Center.

For FAQs about the Administration Center, see

`http://www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html`

and search for **Administration Center**.

Installing the Integrated Solutions Console

The Integrated Solutions Console is required to use the Administration Center and it needs to be installed prior to installing the Administration Center. If an earlier version of the Integrated Solutions Console is already installed, you will have the option of upgrading to Version 6.0.1.

Notes:

1. The time for the installation process to complete depends on the speed of your processor and memory.
2. The Integrated Solutions Console installation media and the Administration Center should be extracted to different directories.
3. If you are upgrading to the Integrated Solutions Console Version 6.0.1:
   - You must also upgrade the Administration Center to Version 5.3.2.
   - Your Integrated Solutions Console Version 5.1 directory will not be removed because it contains log files. Once your upgrade completes successfully, you can delete this directory.
   - There is a possibility that the Integrated Solutions Console Version 5.1 will not properly uninstall, following the migration. If you encounter this situation, you will need to manually uninstall Version 5.1 and then stop and restart the Administration Center. See "Manually Uninstalling the Integrated Solutions Console" on page 24 and "Starting and Stopping the Console Server and Console Help Server" on page 23.

Installation Procedure

1. To install the Integrated Solutions Console, complete one of the following:
   - Insert the Integrated Solutions Console CD into your CD drive. If autorun is enabled, the installation wizard displays. If autorun is off, use Windows Explorer to access the CD drive, double-click the CD, and then double-click **setupISC.exe**.
   - Go to a command prompt.
     a. If you are installing from a CD, change to the CD-ROM directory. If you are installing from the eGA image TSM_ISC_5320_<PLATFORM>.exe, issue the following command to extract the files:
     ```
     TSM_ISC_5320_WIN.exe
     ```
     b. Run one of the following commands to install the Integrated Solutions Console:
     – To run the installation wizard: `setupISC.exe`
     – To run the console installation wizard: `setupISC.exe -console`
     – To perform a silent installation, enter the following command on a single line:
     ```
     setupISC -silent -W ConfigInput.adminName="<user name>"
     -W ConfigInput.adminPass="<user password>"
     -W ConfigInput.verifyPass="<user password>"
     -W PortInput.webAdminPort="<web administration>"
     -W PortInput.secureAdminPort="<secure administration>"
     -P ISCProduct.installLocation="<install location>"
     ```
2. The Integrated Solutions Console installation wizard appears. Follow the wizard directions, accepting the defaults and clicking **Next** to step through the wizard. You will have to check the box to accept the license agreement. Note that you can change the Integrated Solutions Console user ID and password. At

the end of the wizard, the summary panel says that the Integrated Solutions Console has been successfully installed. The last panel directs you to insert the Administration Center CD to continue with Administration Center installation.

3. After the Integrated Solutions Console installation completes, open a Web browser and enter the following URL, which will display the logon screen for the Integrated Solutions Console: http://<machine_name>:8421/ibm/console. This screen indicates a successful installation of the Integrated Solutions Console.

Installing the Administration Center

The Integrated Solutions Console must be running when installing or uninstalling the Administration Center. Installation media for each component should be extracted to different directories.

Note: The Administration Center can display information in languages other than English. You can enable language support during installation. If this support is enabled, the Administration Center attempts to display the same language as the Web browser used to access it. If the Web browser uses a different language than the Tivoli Storage Manager server, some information will be displayed in the language used by the server. To change the default language used by the Web browser, see the browser documentation.

1. To install the Administration Center, complete one of the following:
   - Insert the Administration Center CD into your CD drive. If autorun is enabled, the installation wizard displays. If autorun is off, use Windows Explorer to go to the CD drive, double-click the CD, and then double-click **startinstall.bat**.
   - Go to a command prompt.
     a. If you are installing from a CD, change to the CD-ROM directory. If you are installing from the eGA image TSMAdminCenter5320.exe, issue the following command to extract the files:

        ```
        TSMAdminCenter5320.exe
        ```

     b. Run one of the following commands to install the Administration Center:
        - To run the installation wizard: `startInstall.bat`
        - To run the console installation wizard: `startInstall.bat -console`
        - To perform a silent installation, enter the following command on a single line:

          ```
          startInstall.bat -silent -W AdminNamePanel.adminName="<user name>"
          -W PasswordInput.adminPass="<user password>"
          -W PasswordInput.verifyPass="<user password>"
          -W MediaLocationInput.installMediaLocation="<media location>"
          -W PortInput.webAdminPort="<web administration>"
          -P AdminCenterDeploy.installLocation="<install location>"
          ```

2. The Administration Center installation wizard appears. Follow the wizard directions, accepting the defaults and clicking **next** to step through the wizard. You will have to check the box to accept the license agreement. At the end of the wizard, the summary panel says that the Administration Center has been successfully installed.

Verify Your Installation

After installing the Integrated Solutions Console and Administration Center:

1. Enter the following address in a supported Web browser: http:/<machine_name> /:8421/ibm/console. The machine_name is the network name or IP address of the machine on which you installed the Administration Center.
2. To get started, log in using the Integrated Solutions Console user ID and password you created during the installation. After you successfully log in, the Integrated Solutions Console welcome page is displayed. Expand the Tivoli Storage Manager folder in the **Work Items** list and click **Getting Started** to display the Tivoli Storage Manager welcome page. This page provides instructions for using the Administration Center.

Starting and Stopping the Console Server and Console Help Server

The Integrated Solutions Console server and help are automatically started after a successful installation.

If you shut down the system after the initial installation, any Integrated Solutions Console servers that were started will be stopped. This section describes the commands you use to start and stop the Integrated Solutions Console servers.

In the following commands, the variables have these meanings:

- *<isc_home>* is the root directory for your Administration Center installation.
- *<iscadmin>* is the administrator user ID for Administration Center if the installation uses the WebSphere Application Server embedded in the console runtime. If the installation uses a separate WebSphere Application Server installation, administrator is the administrator user ID for the WebSphere Application Server installation.
- *<iscpass>* is the password for the administrator.

To **start** Integrated Solutions Console system servers, enter:

```
<isc_home>\PortalServer\bin\startISC.bat ISC_Portal <iscadmin> <iscpass>
```

To **stop** Integrated Solutions Console system servers, enter:

```
<isc_home>\PortalServer\bin\stopISC.bat ISC_Portal <iscadmin> <iscpass>
```

Note: You can also start or stop Integrated Solutions Console system servers by using Settings > Control Panel > /Administrative Tools > Services.

Upgrading the Administration Center

To upgrade the Administration Center, complete the steps in "Installing the Administration Center" on page 22

Note: The Integrated Solutions Console should already be installed. It does not need to be uninstalled and reinstalled.
See the Administration Center Readme for the latest information.

Uninstalling the Administration Center

Use the following procedure to uninstall the Administration Center. You must perform this procedure before uninstalling the Integrated Solutions Console. This procedure does not remove the Integrated Solutions Console. In the following commands, the variables have these meanings:

- *<isc_home>* is the root directory for your Integrated Solutions Console installation.
- *<iscadmin>* is the administrator user ID for Administration Center if the installation uses the WebSphere Application Server embedded in the console runtime. If the installation uses a separate WebSphere Application Server installation, administrator is the administrator user ID for the WebSphere Application Server installation.
- *<iscpass>* is the password for the administrator.

Note: The Integrated Solutions Console must be running when uninstalling the Administration Center.

1. Open a command window or go to a command prompt and change to the root directory for your Integrated Solutions Console installation. For example:
   ```
   cd <isc_home>
   ```
2. Run the following command:
   ```
   acuninst.bat <iscadmin> <iscpass>
   ```

You can also uninstall the Administration Center by using **Settings** > **Control Panel** > **Add/Remove Programs**.

Uninstalling the Integrated Solutions Console

Use the following procedure to uninstall the Integrated Solutions Console. Remember, you must first uninstall the Administration Center. In the following commands, the variable *<isc_home>* is the root directory for your Integrated Solutions Console installation.

1. Open a command window or go to a command prompt and change to the following directory:
   ```
   cd <isc_home>\_iscuninst
   ```
2. Run one of the following commands to uninstall the Integrated Solutions Console:
   - To run the uninstall wizard: `uninstaller.exe`
   - To run the console uninstall wizard: `uninstaller.exe -console`
   - To perform a silent uninstall: `uninstaller.exe -silent`

You can also uninstall the Integrated Solutions Console by using **Settings** > **Control Panel** > **Add/Remove Programs**.

Manually Uninstalling the Integrated Solutions Console

If the installation program fails or you are unable to uninstall with the wizard, you can try manually removing the Integrated Solutions Console and then installing it again. In the following commands, the variables have these meanings:

- *<isc_home>* is the root directory for your Integrated Solutions Console installation.
- *<iscadmin>* is the administrator user ID for Administration Center if the installation uses the WebSphere Application Server embedded in the console runtime. If the installation uses a separate WebSphere Application Server installation, administrator is the administrator user ID for the WebSphere Application Server installation.
- *<iscpass>* is the password for the administrator.

Perform the following steps:

1. Open a command window or go to a command prompt.
2. Stop the console server (which is the application server named ISC_Portal) by issuing the following command:

   ```
   <isc_home>\PortalServer\bin\stopISC.bat ISC_Portal <iscadmin> <iscpass>
   ```

3. Stop the application server named server1 by issuing the following command on a single line:

   ```
   <isc_home>\AppServer\bin\stopServer.bat server1 -user
   application_server_administrator -password
   application_server_password
   ```

4. To clean the system temporary directory, perform the following steps:
   a. Change to the system temporary directory. The temporary directory is the value of the operating system variable %TEMP%.
   b. Save a copy of the following files in the temporary directory:
      - ISCRuntimeInstall.log
      - ISCRuntime.rsp
      - ISCRuntimeUninstall.log
      - All of the Portal*.log files
   c. In the temporary directory, delete all of the files and the directories that begin with the string ISC (such as ISCRuntime.rsp, ISC_TEMP, ISCToolkitInstall.log) and all files that begin with the string Portal (such as PortalInit.log and PortalSetupWAS.log).
5. To clean the registry that InstallShield for Multiplatforms uses:
   a. Search the system directory (such as C:\WINNT\vpd.properties).
   b. Save a copy of the vpd.properties file.
   c. Use a text editor to open the vpd.properties file. Use an editor that does not wrap lines so that you can easily isolate single lines for removal. Setting the editor to use a monospace font (for example, Courier) will make it easier to see the file structure.
   d. Delete each line that refers to the path for the root directory of the console runtime. If there are no remaining lines in vpd.properties, leave the file empty or delete it.
6. To manually disable automatic restart at reboot of the console and console server, issue the following commands, each on a single line:

   ```
   <isc_home>\AppServer\bin\wasservice.exe -remove"ISC 6.0.1 Runtime Service"
   <isc_home>\PortalServer\ISCEclipse\EclipseSvc.exe -delete"ISC
   6.0.1 Help Service"
   ```

7. To stop all Java processes for the Integrated Solutions Console, perform the following steps:
   a. Open the Windows Task Manager.
   b. Locate the Java processes and end those processes. Look for a Java process with a Memory Usage over 200 MB.

   Note: There may be other Java processes running for other applications.
8. Delete the environment variable 'ISC_HOME'. Perform the following steps:
   a. Open **My Computer** properties.
   b. Click the **Advanced** tab.
   c. Click **Environment Variables.**
   d. Under **System Variables**, select **ISC_HOME**.
   e. Click **Delete**.
9. Delete the root directory for the Integrated Solutions Console.

Appendix A. Performing a Minimal Configuration

Tivoli Storage Manager provides a minimal configuration option that allows you to quickly evaluate basic product function. This is the fastest way to test simple backup and archive operations. The Tivoli Storage Manager server instance created during minimal configuration stores backed-up data on your hard drive, instead of tape.

When you finish your evaluation, there are several ways to configure your server for use in a production environment:

1. Extend the server instance you created during minimal configuration by performing a wizard-based standard configuration.
2. Manually extend the server instance you created by using the Administration Center, administrative command line, or a script.
3. Remove the server instance and create a new one by performing either the wizard-based standard configuration or a manual server configuration.

Tivoli Storage Manager allows you to remove a server instance without uninstalling server code, so you can easily return to a known starting point after changing settings and exploring product features. You can remove any server instances you create, whether you use a manual or wizard-based configuration process. See "Removing a Server Instance" on page 30 for instructions.

If you are planning to set up Tivoli Storage Manager for immediate use in a production environment, it is recommended that you follow the standard configuration process documented in *Configuring IBM Tivoli Storage Manager* in the *Administrator's Guide*. During the standard configuration, drive performance is analyzed to determine the best location for important Tivoli Storage Manager volumes. For more information about Tivoli Storage Manager configuration options, refer to *Overview of Initial Configuration* in the *Administrator's Guide*.

To perform a minimal configuration, complete the procedures in the following sections.

Install a Tivoli Storage Manager Server and Local Backup-archive Client

To quickly install the Tivoli Storage Manager server and client, do the following. For detailed instructions, refer to "IBM Tivoli Storage Manager Installation Steps" on page 10.

1. Insert the Tivoli Storage Manager Windows Server CD.

   The Tivoli Storage Manager Server CD browser screen appears. (If autorun is disabled, run *setup.exe* in the CD root directory.)
2. Click **Install Products**.

   The **Install Products** dialog appears.
3. Click **Tivoli Storage Manager Server** and follow the installation instructions, using the default settings provided. You will need to specify a language for the installation dialogs.

   At the end of the server installation process, you might be prompted to restart your computer. Before restarting, complete step 4 on page 28. If you are not prompted, no restart is required.

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4. Install the **Tivoli Storage Manager Backup-archive Client**. See *IBM Tivoli Storage Manager for Windows: Backup-Archive Clients Installation and User's Guide*. Follow the installation instructions, using the default settings provided.

   Note: If you plan to set up a Tivoli Storage Manager production environment using this server installation, you should also install the **Tivoli Storage Manager Server Licenses** and **Tivoli Storage Manager Device Driver**. You must restart your computer after installing the device driver.

Configure the Tivoli Storage Manager Server

To quickly configure the Tivoli Storage Manager server, do the following after you have installed the server and client. For detailed instructions, refer to *Performing the Initial Configuration* in the *Administrator's Guide*.

1. Double-click the **Tivoli Storage Manager Management Console** icon on the desktop.

   The **Tivoli Storage Manager Console** window opens, with the **Initial Configuration Task List** displayed. **Minimal configuration** is selected by default.
2. Click **Start**.

   The **Server Initialization Wizard** appears.
3. Click the **Next** button to proceed through the wizard pages, accepting the default settings provided. Refer to *Server Initialization Wizard* in the *Administrator's Guide* for detailed instructions.

   Note: The amount of data you can back up during your test is determined by the free space available on the drive where the initial disk storage pool volume is placed.

Run a Test Backup

To quickly back up and restore some data, do the following. Refer to the *Administrator's Guide* for detailed instructions.

1. Start the Tivoli Storage Manager client. You can choose to have this done automatically after completing the initial configuration process. You can also double-click the **Tivoli Storage Manager Backup Client** desktop icon.

   The **Tivoli Storage Manager Login** dialog appears.
2. Click the **Login** button without entering a password.

   The **Register New Node** dialog appears. Enter a password for the client and click **OK**. The client is registered with the Tivoli Storage Manager server, and the client graphical interface appears.
3. Click the **Backup** icon.

   The **Backup** dialog appears, displaying a tree-view of local and remote drives.
4. Expand a local drive and select the ☑ check box next to a directory or some individual files. Click the **Backup** button.

   Backup data will be stored in local drive space designated for use as a virtual storage device. The amount of data you can back up depends on how much space is available on this drive. For more information, refer to *Minimal Configuration* in the *Administrator's Guide*. When the backup completes, a Backup Report appears.

5. To restore the files, close the Backup Report to return to the client graphical interface and click the **Restore** icon.

   The **Restore** dialog appears, displaying a tree-view of data stored by the Tivoli Storage Manager server.
6. Expand the **File Level** object to view the drive and directory structure for the files you backed up.
7. Select the ☑ check box next to a directory or some files, and click the **Restore** button.

   The **Restore Destination** dialog appears.
8. Select **Original location** and click the **Restore** button.

   When the files are restored, a Restore Report appears.

Where To Go From Here

Refer to *Introducing the IBM Tivoli Storage Manager* in the *Administrator's Guide* to learn more about the full range of Tivoli Storage Manager function. Before setting up a production environment, it is important to take the time to understand the Tivoli Storage Manager approach to storage management. To further explore the capabilities of Tivoli Storage Manager, you can use the configuration and management wizards described in the *Administrator's Guide* to customize the Tivoli Storage Manager server instance you just created.

See *Default Configuration Results* in the *Administrator's Guide*, which describes in detail the default Tivoli Storage Manager environment created during the configuration process.

Ready to Set Up Your Production Environment?

To set up a full production environment, you can extend the test server you created, or remove it and perform a standard configuration to create a new server instance. The best method depends on the complexity of your storage environment. In many cases, it is more efficient to remove the server instance and configure a new one.

Extending a Server Instance

If you extend the server instance created during minimal configuration, any data backed up during your evaluation will be preserved. You should consider moving the server database, recovery log, disk, and file volumes to optimize performance. If you plan to use any clients enabled with data retention protection, or want to improve security, you should change open client registration to closed. See the *Administrator's Guide* for more information.

To extend the server instance using the wizard-based process, do the following:

1. Double-click the **Tivoli Storage Manager Management Console** icon on the desktop.

   The **Tivoli Storage Manager Console** window opens.
2. Expand the **IBM Tivoli Storage Manager** tree in the left pane, expand the local machine name, and expand **Tivoli Storage Manager Server1**.
3. Click **Wizards**.

   A list of wizards appears in the right pane.
4. Select **Initial Configuration** and click **Start**.

   The **Initial Configuration Task List** appears.

5. Select **Standard Configuration** and click **Start**.

   The **Initial Configuration Environment Wizard** appears.
6. Proceed through the sequence of wizards to extend the server configuration.

Removing a Server Instance

If you remove the server instance created during minimal configuration, any data backed up during your evaluation will be lost. However, when you create a new server, you will be able to take performance data into consideration when defining your Tivoli Storage Manager volumes, and closed client registration will be set by default.

To quickly delete a Tivoli Storage Manager server instance (without removing the server code), do the following:

1. Double-click the **Tivoli Storage Manager Management Console** icon on the desktop.

   The **Tivoli Storage Manager Console** window opens.
2. Expand the **IBM Tivoli Storage Manager** tree in the left pane and expand the local machine name.
3. Right-click **Tivoli Storage Manager Server1** and select **Delete Server Instance**.
4. Click the **Select All** button to mark all Tivoli Storage Manager server components for deletion.

   Note: During server initialization, it is possible to change the default location for data files. If you changed any default settings, carefully review the list to ensure that only the correct files are selected.
5. Click the **Delete** button.

See *Performing the Initial Configuration* in the *Administrator's Guide* for standard server configuration instructions.

Appendix B. Performing a Silent Installation

This appendix describes how to perform a silent IBM Tivoli Storage Manager installation. A silent installation runs unattended, requiring no monitoring or dialog box input. No installation wizards appear. Silent installation is run by using the MSIEXEC command from the command line interface, or by incorporating the MSIEXEC command into a command file. The command file can also be used to combine a silent installation of the server with a configuration of the server.

You can use the silent installation method to ensure consistent configuration if you are installing IBM Tivoli Storage Manager on multiple computers with identical hardware. For example, if you have multiple IBM Tivoli Storage Manager servers in different locations, you can produce and distribute a CD containing the same silent installation package for each server. You can also place a silent installation package on a file server for distribution over a network.

Because IBM Tivoli Storage Manager is based on the Microsoft Windows Installer technology, all of the IBM Tivoli Storage Manager components can be deployed using Active Directory and Group Policy. For more information on deploying IBM Tivoli Storage Manager using Group Policy, refer to the Windows 2000 online help.

This appendix contains the following sections that describe how to use the silent installation function:

- "Installing the Server"
- "Installing the Licenses" on page 32
- "Installing the Tivoli Storage Manager Language Packs" on page 12
- "Installing the Backup-Archive Client" on page 33
- "Installing the Device Driver" on page 33
- "Feature Tables" on page 34
- "Including a Custom Client dsm.opt File" on page 35
- "Installation Troubleshooting" on page 36
- "Performing a Silent Uninstall" on page 36

Installing the Server

The MSIEXEC command is used to silently install the IBM Tivoli Storage Manager server, licenses, client, and device driver from the command line. Each of these components should be installed separately by specifying its respective feature information from the feature tables.

The source file of each component can be identified by its .msi extension. These files are located on the product CD.

For more information about the MSIEXEC command, refer to Microsoft documentation.

The following is an example of installing the IBM Tivoli Storage Manager server using the MSIEXEC command for a silent installation. Explanations of the parameters follow the example.

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Command

```
msiexec /i "c:\tsm_images\TSMSRV52_WIN\TSM32\server\IBM Tivoli
Storage Manager Server 5.3.0.0.msi" RebootYesNo="No"
REBOOT="Suppress" ALLUSERS=1 INSTALLDIR="e:\program
files\tivoli\tsm" ADDLOCAL="Server32,Console32"
 TRANSFORMS=1033.mst /qn /l*v "c:\server_log.txt"
```

/i Specifies an installation.

″c:\tsm_imagesTSMSRV52_WIN\TSM32\server\IBM Tivoli Storage Manager Server 5.3.0.0.msi″
Specifies the complete path to the server source package. Look for the actual source package on the product CD. It will have an .msi extension.

RebootYesNo=″No″ REBOOT=″Suppress″
Specifies that a reboot should not be performed. Except for the IBM Tivoli Storage Manager device driver, it is recommended that you not allow a reboot of your machine when using silent installation.

ALLUSERS=1
Specifies that the package is for all users. This parameter is required.

INSTALLDIR=″c:\program files\tivoli\tsm″
Specifies the destination path. If IBM Tivoli Storage Manager is already installed on the system and you are upgrading your server, the existing path will be used as the destination path.

ADDLOCAL=″Online_Main,Online_Server_Readmes,Online_Server, Server_Base″
Specifies the list of features to install. Feature list should be ″Server32,Console32″ for example. See Table 6 on page 34 for a complete list.

TRANSFORMS=1033.mst
Specifies the language transform to use. See Table 13 on page 35 for a complete list.

/qn Specifies that this is a silent install.

/l*v ″c:\install_log.txt″
Specifies verbose logging and the name and location of the IBM Tivoli Storage Manager installation log file.

Installing the Licenses

The following is an example of installing the IBM Tivoli Storage Manager licenses using the MSIEXEC command for a silent installation. Note that only the source package name and the ADDLOCAL parameter are different from the server install example.

Command

```
msiexec /i "c:\tsm_images\TSMSRV52_WIN\TSM32\server\IBM Tivoli
Storage Manager Server 5.3.0.0.msi" RebootYesNo="No"
REBOOT="Suppress" ALLUSERS=1
INSTALLDIR="e:\program files\tivoli\tsm" ADDLOCAL="License32,License64"
TRANSFORMS=1033.mst /qn /l*v "c:\license_log.txt"
```

Installing the Backup-Archive Client

The following is an example of installing the IBM Tivoli Storage Manager backup-archive client using the MSIEXEC command for a silent installation. Note that only the source package name and the ADDLOCAL parameter are different from the server install example. Also note that this example should be modified when installing a Tivoli Storage Manager Backup-Archive Client Language Pack.

Command

```
msiexec /i "Z:\tsm_images\TSM_BA_Client\baclient\Tivoli Storage Manager
Client.msi" RebootYesNo="No"
REBOOT="Suppress" ALLUSERS=1 INSTALLDIR=
"e:\program files\tivoli\tsm" ADDLOCAL="BackupArchiveGUI,BackupArchiveWeb
,ApiRuntime,AdministrativeCmd,Image,OFS,Online_Client_Readmes"
TRANSFORMS=1033.mst /qn /l*v "c:\client_log.txt"
```

Installing the Device Driver

The following is an example of installing the IBM Tivoli Storage Manager device driver using the MSIEXEC command for a silent installation. Note that only the source package name and the ADDLOCAL parameter are different from the server install example.

Command

```
msiexec /i "c:\tsm_images\TSMSRV52_WIN\TSM32\server\IBM Tivoli
Storage Manager Server 5.3.0.0.msi" RebootYesNo="No"
 REBOOT="Suppress" ALLUSERS=1
INSTALLDIR="e:\program files\tivoli\tsm"
ADDLOCAL="DeviceWin2k,DeviceNet32,DeviceNet64"
TRANSFORMS=1033.mst /qn /l*v "c:\driver_log.txt"
```

Installing the Language Packs

The following is an example of installing the IBM Tivoli Storage Manager language packs using the MSIEXEC command for a silent installation. Note that only the source package name and the ADDLOCAL parameter are different from the server install example.

Command

```
msiexec /i "C:\tsm_images\TSM52_WIN\Common\langpack\lang_fra\
IBM Tivoli Storage Manager 5.3.0.0 - French.msi"
RebootYesNo="No" REBOOT="Suppress" ALLUSERS=1
INSTALLDIR="e:\program files\tivoli\tsm"
ADDLOCAL="fra_console,fra_server"
TRANSFORMS=1033.mst /qn /l*v "c:\driver_log.txt"
```

Installing the Storage Agent

The following is an example of installing the IBM Tivoli Storage Manager storage agent using the MSIEXEC command for a silent installation. Note that only the source package name and the ADDLOCAL parameter are different from the server install example.

Command

```
msiexec /i "C:\tsm_images\TSM52_WIN\TSM32\Stagent\
IBM Tivoli Storage Manager Storage Agent 5.3.0.0.msi"
RebootYesNo="No" REBOOT="Suppress" ALLUSERS=1
INSTALLDIR="e:\program files\tivoli\tsm"
ADDLOCAL="Console32,StorageAgent32"
TRANSFORMS=1033.mst /qn /l*v "c:\driver_log.txt"
```

Feature Tables

Table 6. Server Features and Feature Descriptions

Server Feature	Description
Server32	32–bit package
Server64	This feature only available on 64-bit package
Console32	

Table 7. Server License Feature and Feature Description

Server License Feature	Description
License32	Server License
License64	Server License. This feature is only available in the 64-bit license package.

Table 8. Backup Archive Client Features and Feature Descriptions

Client Feature	Description
BackupArchiveGUI	BA Graphical User Interface
BackupArchiveWeb	BA Web Client
ApiRuntime	API Runtimes
ApiSdk	API SDK
AdministrativeCmd	Administrative Command Line
Readmes	Client Readmes and HTMLHelp Book
BooksPdf	PDF Book

Table 9. Client Language Pack Features and Feature Descriptions

Client Language Pack Features	Feature Description
LanguageFiles	Language-specific files

Table 10. Device Driver Features and Feature Descriptions

Device Driver Feature	Description
DeviceWin2k	Only available on 32-bit package
DeviceNet32	Only available on 32-bit package
DeviceNet64	Only available on 64-bit package

Table 11. Storage Agent Features and Feature Descriptions

Storage Agent Feature	Description
Console32	Only available on 32-bit package
StorageAgent64	Only available on 64-bit package

Table 12. Language Pack Features and Feature Descriptions

Language Pack Feature	Description
chs_server	Simplified Chinese language support
chs_console	Simplified Chinese language support
cht_server	Traditional Chinese language support

Table 12. Language Pack Features and Feature Descriptions (continued)

Language Pack Feature	Description
cht_console	Traditional Chinese language support
deu_server	German language support
deu_console	German language support
esp_server	Spanish language support
esp_console	Spanish language support
fra_server	French language support
fra_console	French language support
itn_server	Italian language support
itn_console	Italian language support
jpn_server	Japanese language support
jpn_console	Japanese language support
kor_server	Korean language support
kor_console	Korean language support
ptb_server	Portuguese language support
ptb_console	Portuguese language support

Table 13. Transform and Language

Transform	Language
1028.mst	CHT Traditional Chinese
1031.mst	DEU German
1033.mst	ENG English
1034.mst	ESP Spanish
1036.mst	FRA French
1040.mst	ITA Italian
1041.mst	JPN Japanese
1042.mst	KOR Korean
1046.mst	PTB Portuguese
2052.mst	CHS Simplified Chinese

Including a Custom Client dsm.opt File

Users who would like to install a predefined DSM.OPT file should place a copy of the DSM.OPT file in the CONFIG directory located within the install image.

```
tsm_images\TSM_BA_Client\baclient\Program Files\Tivoli\TSM\config.
```

The file must be named DSM.OPT.

The installation program will copy the predefined DSM.OPT file to the ..\BACLIENT directory when both of the following conditions are met:

- DSM.OPT does NOT exist in the ..\BACLIENT directory on the target computer. The installation program will not copy over an existing DSM.OPT file.
- DSM.OPT exists in the install image's CONFIG directory, as described above.

Installation Troubleshooting

Table 14. Symptoms and Resolutions

Symptom	Resolution
You receive a message during setup indicating that you do not have enough free space to install on a drive that does have free space.	Try updating an entry in the setup.ini file that is included with the package. If your package is on CD, you'll have to copy the entire package to a hard drive so that you can edit setup.ini. Once setup.ini is available on your hard drive you can edit it and change the line DiskSpace=8000 to DiskSpace=0000.
You do not see any Tivoli Storage Manager icons on the desktop after an installation.	Click on an empty area of the desktop and press F5 to refresh the desktop display.
Near the end of the installation process, a warning message box titled 'HTML 1.31 Update' displays with the text, "This computer already has a newer version of HTML Help."	Click on the OK button and continue.
Silent Installation doesn't appear to work.	Remove the /qn parameter and re-execute your msiexec command. Any errors should be displayed. After you fix the problem add the /qn parameter again.

Performing a Silent Uninstall

You should stop any running IBM Tivoli Storage Manager services before performing an uninstallation. To see which IBM Tivoli Storage Manager services are running, you can type **net start** in a Windows command prompt. Look for any services that have IBM Tivoli Storage Manager in them. If you have installed any IBM Tivoli Storage Manager services using your own names, look for those as well. Each IBM Tivoli Storage Manager service you plan to remove should be stopped. To stop a IBM Tivoli Storage Manager service, type **net stop** "**service name.**" For example, to stop the first server instance you can type **net stop** "**tsm server1.**"

You can silently uninstall the IBM Tivoli Storage Manager server, licenses, and device driver by using the /x parameter instead of the /i parameter for each command. All other parameters remain the same.

The following is an example of silently uninstalling the IBM Tivoli Storage Manager server using the MSIEXEC command.

Command

```
msiexec /x "c:\tsm_images\TSM51_Complete\server\Tivoli Storage
Manager Server 5.0.msi" RebootYesNo="No" REBOOT="Suppress"
ALLUSERS=1 INSTALLDIR="c:\program files\tivoli\tsm"
ADDLOCAL="Online_Main,Online_Server_Readmes,Online_Server,
Server_Base" TRANSFORMS=1033.mst /qn /l*v c:\install_log.txt
```

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Part Number: CT3QGNA
Program Number: 5608-ISM
5608-ISX
5608-SAN

Printed in USA

(1P) P/N: CT3QGNA

GC32-1602-01

Spine information:

IBM Tivoli Storage Manager for Windows **Version 5.3** **Installation Guide**