IBM Tivoli Storage Manager HSM for Windows
Version 7.1

Messages

IBM
Note:

Before using this information and the product it supports, read the information in “Notices” on page 39.
Contents

About this publication .................................... v
  Who should read this publication ....................... v
  Publications ........................................ v

Chapter 1. Introduction to HSM for
Windows messages .................................. 1
  HSM for Windows client messages format .......... 1

Chapter 2. HSM for Windows client
messages ........................................ 3

Appendix A. Tivoli support information .......... 31
  Communities and other learning resources ...... 31
  Searching knowledge bases ....................... 33
    Searching the Internet .......................... 33
    Using IBM Support Assistant .................. 33
  Finding product fixes .......................... 34
  Receiving notification of product fixes .......... 34
  Contacting IBM Software Support ............... 34
    Setting up and managing support contracts. .. 35
    Determining the business impact .......... 35
    Describing the problem and gathering
      background information ....................... 35
    Submitting the problem to IBM Software Support 36

Appendix B. Accessibility features for
the Tivoli Storage Manager product
family ........................................ 37

Glossary ........................................ 43
  A ........................................ 43
  B ........................................ 45
  C ........................................ 46
  D ........................................ 47
  E ........................................ 49
  F ........................................ 50
  G ........................................ 50
  H ........................................ 51
  I ........................................ 52
  J ........................................ 52
  K ........................................ 52
  L ........................................ 53
  M ........................................ 54
  N ........................................ 55
  O ........................................ 56
  P ........................................ 56
  Q ........................................ 57
  R ........................................ 58
  S ........................................ 59
  T ........................................ 62
  U ........................................ 62
  V ........................................ 63
  W ........................................ 65

Notices ........................................ 39
  Trademarks .................................... 41
  Privacy policy considerations .................. 41

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About this publication

This publication contains explanations and suggested actions for messages issued by the IBM® Tivoli® Storage Manager HSM for Windows client.

Who should read this publication

The target audience for this publication is system administrators who use the IBM Tivoli Storage Manager HSM for Windows client. In this publication, it is assumed that you have a working knowledge of the HSM for Windows client.

Publications

Publications for the Tivoli Storage Manager family of products are available online. The Tivoli Storage Manager product family includes IBM Tivoli Storage FlashCopy® Manager, IBM Tivoli Storage Manager for Space Management, IBM Tivoli Storage Manager for Databases, and several other storage management products from IBM Tivoli.

To search across all publications or to download PDF versions of individual publications, go to the Tivoli Storage Manager information center at [http://pic.dhe.ibm.com/infocenter/tsminfo/v7r1](http://pic.dhe.ibm.com/infocenter/tsminfo/v7r1)

You also can find the Tivoli Storage Manager product family information centers and other information centers that contain official product documentation for current and previous versions of Tivoli products at Tivoli Documentation Central. Tivoli Documentation Central is available at [http://www.ibm.com/developerworks/community/wikis/home/wiki/Tivoli Documentation Central](http://www.ibm.com/developerworks/community/wikis/home/wiki/Tivoli Documentation Central)
Chapter 1. Introduction to HSM for Windows messages

Messages with prefix ANS and in the range 27000-28999 are issued by the IBM Tivoli Storage Manager HSM for Windows client.

For information about ANS messages with message numbers below 27000, see the IBM Tivoli Storage Manager Client Messages and Application Programming Interface Return Codes publication.

HSM for Windows client messages format

The IBM Tivoli Storage Manager HSM for Windows client messages consist of the following elements:

- A three-letter prefix.
- A numeric message identifier.
- A one-letter severity code, also called the message type.
- Message text that is displayed on screen and written to message logs.
- Explanation, System Action, and User Response texts. These texts elaborate on the message text and are available in the product's messages publications and in the command line help.

The following image presents a typical HSM for Windows client message.

The callouts identify each element of the message.

- Message prefix
- Message number
- Message type
- Message text
- Explanation
- System action
- User response

I = Information
* E = Error
S = Severe error
W = Warning

The message type gives an indication of the severity of the issue that generated the message. There are four message types:
<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Severe</td>
<td>The product or a product function cannot continue. User response is required.</td>
</tr>
<tr>
<td>E</td>
<td>Error</td>
<td>An error is encountered during processing. Processing might stop. User response might be required.</td>
</tr>
<tr>
<td>W</td>
<td>Warning</td>
<td>Processing continues, but problems might occur later as a result of the warning.</td>
</tr>
<tr>
<td>I</td>
<td>Information</td>
<td>Processing continues. User response is not necessary.</td>
</tr>
</tbody>
</table>

Message variables in the message text appear in italics.
Chapter 2. HSM for Windows client messages

IBM Tivoli Storage Manager HSM for Windows client messages are listed in ascending numerical order. The complete message is documented, including message ID, message text, explanation, system action, and user response.

ANS27024E  Failure creating TSM file space 'file space name': error text
Explanation: The TSM file space could be not created.
System action: The desired operation cannot be executed.
User response: Check if the archive already exists, and check server permissions.

ANS27025E  Failure deleting TSM file space 'file space name': error text
Explanation: The TSM file space could be not deleted.
System action: The desired operation cannot be executed.
User response: Check if the archive exists, and check server permissions.

ANS27026E  The file space 'file space name' does not exist
Explanation: The file space does not exist on the server.
System action: The operation cannot be performed due to a missing file space.
User response: Specify an existing file space for the desired operation.

ANS27027E  Failure querying if file space 'file space name' exists: error text
Explanation: Querying the TSM server for a file space failed.
System action: The desired operation cannot be performed.
User response: Check server permissions.

ANS27028E  Failure parsing configuration file 'config file name': error text
Explanation: The global XML configuration file could not be parsed correctly and may contain corrupted data.
System action: The desired operation cannot be performed.
User response: Correct the option file or create a new option file in the installation directory using the wizard.

ANS27029E  The configuration file 'file name' could not be found
Explanation: The global XML job configuration file could not be found.
System action: The desired operation cannot be performed.
User response: Restore the global XML configuration file or re-install the product.

ANS27030E  Failure parsing job file 'job file name': error text
Explanation: The job file could not be parsed correctly and may contain corrupted data.
System action: The desired migration operation cannot be performed.
User response: Restore the job file from backup, or delete the corrupted file and re-create the job from scratch.

ANS27031E  The job file 'job file name' could not be found
Explanation: A migration XML job file could not be found.
System action: The migration job cannot be executed.
User response: Specify an existing job file or create the missing job file.

ANS27032E  Failure parsing TSM option file 'opt file name': error text
Explanation: The TSM option file could not be parsed correctly.
System action: The desired operation cannot be performed as necessary TSM configuration data is missing.
User response: Correct the option file or create a new option file in the installation directory using the wizard.
<table>
<thead>
<tr>
<th>Code</th>
<th>Message</th>
<th>Explanation</th>
<th>System action</th>
<th>User response</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS27033E</td>
<td><strong>The configuration file 'config file name' could not be found</strong></td>
<td>The TSM option file could not be found</td>
<td>The desired operation cannot be performed as necessary TSM configuration data is missing.</td>
<td>Create a new option file in the installation directory using the wizard or copy an existing option file in the installation directory.</td>
</tr>
<tr>
<td>ANS27034E</td>
<td><strong>The connection to server server name, could not be closed correctly: error text</strong></td>
<td>The application could not close the TCP/IP connection to the TSM server correctly.</td>
<td>The system will release the connection after a timeout.</td>
<td>No user response necessary. However, you may restart your server and the application.</td>
</tr>
<tr>
<td>ANS27035E</td>
<td><strong>The connection to TSM server server name, port port number, could not be established: error text</strong></td>
<td>The application could not connect to the configured TSM server.</td>
<td>The server operation is not performed.</td>
<td>Check if the repository server is reachable and well configured, and check your connection data in the TSM option file.</td>
</tr>
<tr>
<td>ANS27036E</td>
<td><strong>Failure deleting TSM server entries for file 'file name': error text</strong></td>
<td>A repository file entry could not be deleted on server.</td>
<td>An error log entry is written and the system continues with next file entries.</td>
<td>Check the TSM server permissions and sanity. Retry server entry file deletion.</td>
</tr>
<tr>
<td>ANS27037E</td>
<td><strong>Failure querying the TSM server for file entries with pattern search pattern: error text</strong></td>
<td>Querying the server for the requested files failed.</td>
<td>The TSM server entry deletion operation is not performed.</td>
<td>Check TSM server permissions and sanity. Retry the deletion operation.</td>
</tr>
<tr>
<td>ANS27038E</td>
<td><strong>Failure opening file deletion transaction: error text</strong></td>
<td>The application could not establish the transaction context for entry deletion on the TSM server.</td>
<td>The file entry or the file entries are not deleted on the TSM server.</td>
<td>Check TSM server permissions and sanity. Retry the deletion operation.</td>
</tr>
<tr>
<td>ANS27039E</td>
<td><strong>Failure closing file deletion transaction: error text</strong></td>
<td>The application could not close the transaction context for entry deletion on the TSM server.</td>
<td>None. The operation continues with the next action.</td>
<td>Check TSM server permissions and sanity. Retry the deletion operation.</td>
</tr>
<tr>
<td>ANS27040E</td>
<td><strong>An error occurred during file analysis: error text</strong></td>
<td>The absolute file path could not be obtained.</td>
<td>The program terminates.</td>
<td>Check file permissions and security settings.</td>
</tr>
<tr>
<td>ANS27041E</td>
<td><strong>An error occurred during file analysis</strong></td>
<td>File attributes could not be obtained.</td>
<td>The program terminates.</td>
<td>Check file permissions and security settings.</td>
</tr>
<tr>
<td>ANS27042E</td>
<td><strong>An error occurred during file analysis</strong></td>
<td>The backend query for the file failed.</td>
<td>The program terminates.</td>
<td>Check server accessibility and permissions.</td>
</tr>
<tr>
<td>ANS27043E</td>
<td><strong>An error occurred during file analysis</strong></td>
<td>File MD5 key could not be calculated.</td>
<td>The program terminates.</td>
<td>Check file permissions and security settings.</td>
</tr>
<tr>
<td>ANSI Code</td>
<td>Message Description</td>
<td>Explanation</td>
<td>System Action</td>
<td>User Response</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ANS27044E</td>
<td>An error occurred during file analysis: <em>error text</em></td>
<td>File reparse data could not be read.</td>
<td>The program terminates.</td>
<td>Check file permissions and security settings.</td>
</tr>
<tr>
<td>ANS27045E</td>
<td>An error occurred during file analysis: <em>error text</em></td>
<td>File security could not be obtained or evaluated.</td>
<td>The program terminates.</td>
<td>Check file permissions and security settings.</td>
</tr>
<tr>
<td>ANS27046E</td>
<td>A program initialization problem occurred: <em>error text</em></td>
<td>Registry values, file or directories where missing and could not have been created.</td>
<td>The program terminates.</td>
<td>Check registry values and installation directory permissions, or re-install the product.</td>
</tr>
<tr>
<td>ANS27047E</td>
<td>A program initialization problem occurred: <em>error text</em></td>
<td>Logging could not be started.</td>
<td>The program terminates.</td>
<td>Check logging directory and log file locking, permissions and security.</td>
</tr>
<tr>
<td>ANS27048E</td>
<td>A program initialization problem occurred: <em>error text</em></td>
<td>Memory objects could not be created by the program.</td>
<td>The program terminates.</td>
<td>Check the memory state of the computer running the program.</td>
</tr>
<tr>
<td>ANS27049E</td>
<td>Failure querying with pattern <em>search pattern</em>: <em>error text</em></td>
<td>Multiple entries for the same file and version have been found. This error indicates inconsistent file entries in the file space.</td>
<td>The operation is aborted.</td>
<td>Run the reconciliation tool. Rerun the operation.</td>
</tr>
<tr>
<td>ANS27050E</td>
<td>Failure querying TSM server for file entries with pattern <em>search pattern</em>: <em>error text</em></td>
<td>Querying the TSM server for the requested files failed.</td>
<td>The TSM server entry listing operation is not performed.</td>
<td>Check TSM server permissions and sanity. Retry the list operation.</td>
</tr>
<tr>
<td>ANS27051E</td>
<td>An error occurred during a file rename operation with pattern <em>search pattern</em>: <em>error text</em></td>
<td>Server file entry rename operation failed.</td>
<td>The TSM server entry rename operation is not performed.</td>
<td>Check server configuration and permissions.</td>
</tr>
<tr>
<td>ANS27052E</td>
<td>Failure querying TSM server for file entries with pattern <em>search pattern</em>: <em>error text</em></td>
<td>Querying the TSM server for the requested files failed.</td>
<td>The TSM server entry rename operation is not performed.</td>
<td>Check TSM server permissions and sanity. Retry the rename operation.</td>
</tr>
<tr>
<td>ANS27053E</td>
<td>Failure opening file rename transaction: <em>error text</em></td>
<td>The application could not open the transaction context for an entry rename operation on the TSM server.</td>
<td>None. The operation continues with the next action.</td>
<td>Check TSM server permissions and sanity. Retry the rename operation.</td>
</tr>
<tr>
<td>ANS27054E</td>
<td>Failure closing file rename transaction: <em>error text</em></td>
<td>The application could not close the transaction context for an entry rename operation on the TSM server.</td>
<td>None. The operation continues with the next action.</td>
<td>Check TSM server permissions and sanity. Retry the rename operation.</td>
</tr>
</tbody>
</table>
ANS27055E  Failure restoring file 'file name': error text
Explanation: Multiple entries for the same file and version have been found. This error indicates inconsistent file entries in the file space.
System action: The operation is aborted.
User response: Run the reconciliation tool. Rerun the operation.

ANS27056E  Failure querying TSM server for file entries with pattern search pattern: error text
Explanation: Querying the TSM server for the requested files failed.
System action: The TSM server entry retrieve operation is not performed.
User response: Check TSM server permissions and sanity. Retry the retrieve operation.

ANS27057E  Failure resetting connection to TSM server 'server name': error text
Explanation: After a file has been retrieved or recalled from a tape library the TSM server connection needs to be reset to release the tape.
System action: None. The application continues with the next operation.
User response: Check server TCP/IP connection and the tape library.

ANS27058E  Failure retrieving files 'file name or pattern' from TSM server 'server name': error text
Explanation: Requested files could not be retrieved from the TSM server.
System action: The retrieve operation is aborted.
User response: Check server address, configuration and permissions, check file space and disk space on file system.

ANS27059E  Failure deleting file 'file name' from the file system: error text
Explanation: The file has been stored on the TSM server. Removing the file from the file system failed.
System action: The file is kept as is. File attributes and file times are recovered.
User response: Check file and volume permissions. Rerun the file migration.

ANS27060E  Failure preparing file entry 'file name' for migration to TSM server 'server name': error text
Explanation: TSM server file entry information could not be completely computed.
System action: The file is not migrated to the TSM server.
User response: Restart the file migration.

ANS27061E  Failure loading files on the TSM server 'server name': error text
Explanation: During the file migration a global error occurred.
System action: The file migration will be aborted.
User response: Check server address, configuration and permissions, check file space.

ANS27062E  Failure turning file 'file name' into a stub file: error text
Explanation: The file has been stored on the TSM server. Turning the file into stub file failed.
System action: The file is kept as is. File attributes and file times are recovered.
User response: Check if your files have extended attributes which is not allowed. Rerun the file migration.

ANS27063E  Failure sending file data of 'file name' to TSM server 'server name': error text
Explanation: Some file content could not be sent to the TSM server file space.
System action: The file content transaction is canceled. The file is not stored on the server.
User response: Check the TSM server for data space. Retry the file migration.

ANS27064E  Failure opening file migration transaction: error text
Explanation: The application could not open the transaction context for a file migration to the TSM server.
System action: The file entry or the file entries are not migrated on the TSM server.
User response: Check TSM server permissions and sanity. Rerun the file migration.
ANS27065E  Failure closing file migration
transaction: error text

Explanation: The application could not close the
transaction context for a file migration to the TSM
server.

System action: None. The operation continues with
the next action.

User response: Check TSM server permissions and
sanity. Retry the file migration.

ANS27066E  Failure removing protection from file
'file name': error text

Explanation: To migrate a file the file protection
(read-only flag) must be removed.

System action: The file is not migrated. Attributes are
restored.

User response: Check file permissions and user
permissions.

ANS27067E  Failure validating migrated file 'file
name': error text

Explanation: A file has been migrated to the TSM
server but could not be queried on that server.

System action: The file is not turned into a stub files.
Files attributes are restored on the file system.

User response: Retry file migration.

ANS27068E  The file 'file name' specified as parameter
was not found

Explanation: The file specified as parameter could not
be found.

System action: The program terminates.

User response: Specify a path to an existing file.

ANS27069E  The program 'program name' was used in
an incorrect way

Explanation: The specified parameter syntax is not
correct.

System action: The program terminates.

User response: Type the program name for usage
information or refer to the documentation.

ANS27090E  An error occurred during file analysis:
error text

Explanation: The file object id could not be obtained
or set.

System action: The program terminates.

User response: Check file permissions and security
settings.

ANS27353E  An unexpected error occurred when
terminating the program. Errno value: 0xerrno String

Explanation: An unexpected error occurred after
stopping logging.

System action: The application continues.

User response: Contact IBM Software Support for help
and indicate the message text information.

ANS27354E 'ALL' cannot be used as file space name.

Explanation: The HSM reserved key word 'ALL' was
used as file space name.

System action: The application aborts.

User response: Check the specified file space list.

ANS27355E  Unable to copy 'extension dll name' to
%%WINDIR%%\Cluster'.

Explanation: The application cannot copy extension
dll to %%WINDIR%%\Cluster'.

System action: The application aborts.

User response: Check the log file for error details.

ANS27356E  Unable to copy 'resource type dll name' to
%%WINDIR%%\Cluster'.

Explanation: The application cannot copy resource
type dll to %%WINDIR%%\Cluster'.

System action: The application aborts.

User response: Check the log file for error details.

ANS27357E  Unable to register the resource type dlls.
The cluster state cannot be determined.

Explanation: The installation cannot determine the
cluster state.

System action: The application aborts.

User response: Make sure that the node belongs to a
cluster.

ANS27358E  Unable to get windows directory of the
node.

Explanation: The application cannot get windows
directory of the node.

System action: The application aborts.

User response: Check the log file for error details.
ANS27359E  Could not initialize backend libraries.
Explanation: Backend library initialization failed.
System action: Extension dialog can't be opened.
User response: Please verify that the backend libraries are installed and configured.

ANS27360E  Could not initialize backend libraries or missing configuration file (dsm.opt).
Explanation: Backend library initialization failed or configuration file (dsm.opt) is missing.
System action: The application aborts.
User response: Verify whether the backend libraries are installed and configuration file (dsm.opt) is configured.

ANS27361E  Can't save configuration. Mount path no longer exists: 'mount path'
Explanation: Extension dialog tried to save a configuration for a mount path that meanwhile has disappeared.
System action: The configuration is not saved, but stays in registry, if it was already saved before. The dialog displays another mount path.
User response: Select the Cleanup button to interactively remove mount paths from the registry.

ANS27362E  Can't save configuration of mount path: 'other mount path' The volume is already configured through mount path: 'other mount path'
Explanation: Extension dialog tried to configure a volume with a mount path which is already configured through another mount path.
System action: The configuration is not saved. The mount path stays configured through the other mount path.
User response: To change the configuration, select the other mount path and apply changes there.

ANS27363E  The specified volume could not be unconfigured.
Explanation: Deleting the configuration of the specified volume from registry failed unexpectedly.
System action: The configuration of the specified volume may be corrupted.
User response: Try to delete the configuration again. If deleting the configuration fails again, contact IBM Software Support.

ANS27364E  Cannot unconfigure while reconcile is running on volume.
Explanation: You tried to unconfigure a volume while reconcile is running on that volume.
System action: Volume stays configured.
User response: Wait until the reconciliation of this volume is done. Then the volume can be unconfigured.

ANS27365E  Unable to perform COM registration of resource type extension dll.
Explanation: The application cannot perform COM registration of resource type extension dll.
System action: The application aborts.
User response: Make sure that the resource type extension dll exists under the %WINDIR%\Cluster and check the log file for error details.

ANS27366E  Unable to perform COM unregistration of resource type extension dll.
Explanation: The application cannot perform COM unregistration of resource type extension dll.
System action: The application aborts.
User response: Make sure that the resource type extension dll exists under the %WINDIR%\Cluster and check the log file for error details.

ANS27367E  Unable to unregister resource type dll, because there is still reconcile configuration on the cluster.
Explanation: Unable to unregister resource type dll, because there is still reconcile configuration on the cluster.
System action: The application aborts.
User response: Delete all of reconcile configurations on the cluster and try the operation again.

ANS27368I  Please create at least 1 file space before using the extension panel.
Explanation: To configure volumes for reconciliation at least one file space is required.
System action: Extension dialog is not displayed.
User response: Create a file space. Then open the extension panel.

ANS27369E  Failure creating file needed for reconciliation (expected size KB): file name
Explanation: Reconcile hashtable file could not be created. The file is needed to store information during reconciliation.
System action: Reconcile is aborted for this volume.
User response: Make sure there is enough free space on the volume to create the file. Add some extra space as the file size is only an estimate and might need additional space.

ANS27370E Failure running the application: error message
Explanation: An application error occurred.
System action: The application aborts.
User response: Check the log file for error details.

ANS27371E Cannot define the current node resource.
Explanation: Definition of the Microsoft cluster node failed.
System action: The application aborts.
User response: Check the log file for error details.

ANS27372E Cannot define owner of the resource 'resource name'.
Explanation: Define owner of Microsoft cluster resource failed.
System action: The application aborts.
User response: Check the log file for error details.

ANS27373E Failure deleting Tivoli Storage Manager server object. load time: 'load time', server: 'server', user: 'user', filespace: 'filespace', Tivoli Storage Manager server object ID (hi/lo): 0xhi / 0xlo
Explanation: An error occurred while reconciliation tried to delete a server object.
System action: Delete operation is skipped and reconciliation proceeds.
User response: Verify that the Tivoli Storage Manager server is accurately configured and available.

ANS27374E An unexpected error occurred when terminating the program.
Explanation: An unexpected error occurred when deleting instance.
System action: The application continues.
User response: Check the log file and contact IBM Software Support for help.

ANS27375E Cannot delete resource 'resource name'.
Explanation: Delete Microsoft cluster resource failed.
System action: The application aborts.
User response: Make sure that the resource belongs to the local host. Check the log file for error details.

ANS27376E The file space names in the list were not unique.
Explanation: There were two file spaces with the same name.
System action: The application aborts.
User response: Check the specified file space list.

ANS27377E Unable to enumerate the registered resource types on the node.
Explanation: Unexpected error occurred when enumerating the registered resource types on the node.
System action: The application aborts.
User response: Check the log file for error details.

ANS27378E Failure validating registry key: 'registry key' Error: 'error'
Explanation: A registry key used for reconcile configuration contains invalid data.
System action: Operation aborts.
User response: Contact IBM Software Support.

ANS27379W Failure while saving configuration for mount path: mount path
Explanation: An error occurred while saving configuration to registry.
System action: System will reload saved configuration and apply a general validation check. Settings might differ from previous input.
User response: Check all settings of currently displayed mount path. If validation fails, contact IBM Software Support.

ANS27380E Unable to set loaded dll free.
Explanation: The application cannot set loaded dll free.
System action: The application aborts.
User response: Check the log file for error details.
ANS27381E  Unable to unload the resource type extension dll.

Explanation: The application cannot unload the resource type extension dll.

System action: The application aborts.

User response: Make sure that the resource type extension dll exists under the %%WINDIR%%\Cluster and check the log file for error details.

ANS27382E  Unable to get version number of 'dll name'.

Explanation: The application cannot get version number of dll.

System action: The application aborts.

User response: Make sure that dll exists and has not been modified.

ANS27383E  Getting file spaces failed.

Explanation: The program was not able to get the list of file spaces.

System action: The conversion program aborts.

User response: Please check the connection to the database server.

ANS27384E  Cannot get name of the resource 'resource ID'.

Explanation: Get name of Microsoft cluster resource failed.

System action: The application aborts.

User response: Check the log file for error details.

ANS27385E  Unable to get state of resource type dlls.

Explanation: Unable to get state of resource type dlls.

System action: The application aborts.

User response: Make sure that the resource type dlls (HSMResTypDLL.dll and HSMResTypDLLEx.dll) were registered and copied into the right directory and check the log file for error details.

ANS27386E  Unable to get state of registration of resource type dlls.

Explanation: The application cannot get the state of registration of resource type dlls.

System action: The application aborts.

User response: Check the log file for error details.

ANS27387E  hsmmonitor service has stopped due to an error. Error is written to Windows event log.

Explanation: Hsmmonitor service has been stopped with an error.

System action: Error is written to Windows event log. Scheduled reconcile tasks will not execute.

User response: Restart hsmmonitor service as soon as possible to assure that reconcile tasks will be processed.

ANS27388W  hsmmonitor service has stopped.

Explanation: Hsmmonitor service has been stopped.

System action: Scheduled reconcile tasks will not execute.

User response: Restart hsmmonitor service as soon as possible to assure that reconcile tasks will be processed.

ANS27389W  Hsmmonitor service has stopped with a warning. Warning is written to Windows event log.

Explanation: Hsmmonitor service has been stopped with a warning.

System action: Warning is written to Windows event log. Scheduled reconcile tasks will not execute.

User response: Restart hsmmonitor service as soon as possible to assure that reconcile tasks will be processed.

ANS27390W  service name is not yet running. Reconcile tasks will be delayed until it is running.

Explanation: The service is needed for reconcile tasks to execute.

System action: Scheduled reconcile tasks will be delayed until the service is running.

User response: If the service does not start automatically, start it manually. Otherwise simply wait until it has started.

ANS27391E  The HSM recall service is not running.

Explanation: If the HSM recall service is not running, stub file attributes cannot be read.

System action: Reconciliation canceled because of the missing HSM recall service.

User response: Start the HSM recall service and rerun reconciliation.
ANS27392W  Found an inconsistent file: 'orphan file name'.
Explanation:  Found a file without an external object ID or unequal object IDs.
System action:  The process ignores this inconsistency and continues.
User response:  This problem can be solved by remigrating the file.

ANS27393E  Initialization of extension utility failed: error message
Explanation:  Failure when initializing an extension utility.
System action:  The application or reconcile dialog aborts.
User response:  Make sure application is running under an administrator account. Check the log file for error details.

ANS27394E  Installation of resource type dlls failed.
Explanation:  The application cannot install resource type dlls.
System action:  The application aborts.
User response:  Check the log file for error details.

ANS27395E  Versions of deleted files must be between minimum versions of deleted files and maximum versions of deleted files.
Explanation:  The specified value for versions of deleted files was not valid.
System action:  Show the correct range for version of deleted files. The application aborts.
User response:  Check the validity of the specified parameter value.

ANS27396E  Versions of existing files must be between minimum versions of existing files and maximum versions of existing files.
Explanation:  The specified value for versions of existing files was not valid.
System action:  Show the correct range for version of existing files. The application aborts.
User response:  Check the validity of the specified parameter value.

ANS27397E  The Next Reconcile Time was not valid.
Explanation:  The specified next reconcile time was not valid.
System action:  Show the correct format of next reconcile time. The application aborts.
User response:  Check the validity of the specified parameter value.

ANS27398E  The Reconcile Interval must be between minimum of reconcile interval and maximum of reconcile interval. ( both inclusive )
Explanation:  The specified reconcile interval was not valid.
System action:  Show the correct range of reconcile interval. The application aborts.
User response:  Check the validity of the specified parameter value.

ANS27399E  Please give 'yes' or 'no' to the RECONCILENOW-option.
Explanation:  The specified value for option RECONCILENOW was not valid.
System action:  Show the correct value for option RECONCILENOW. The application aborts.
User response:  Check the validity of the specified parameter value.

ANS27400E  License expired.
Explanation:  License expired.
System action:  Extension dialog can't open.
User response:  Check license.

ANS27401E  License expired.
Explanation:  License expired.
System action:  The application aborts.
User response:  Check license.

ANS27402E  License Registration failed.
Explanation:  License Registration failed.
System action:  Extension dialog can't open.
User response:  Check license.

ANS27403E  License Registration failed.
Explanation:  License Registration failed.
System action:  The application aborts.
User response:  Check license.
ANS27404E  Unable to load required dll 'dll name'.
Explanation: The application cannot load required dll.
System action: The application aborts.
User response: Check the log file for error details.

ANS27405E  Unable to load resource type extension dll.
Explanation: The application cannot load the resource type extension dll.
System action: The application aborts.
User response: Make sure that the resource type extension dll exists under the %%WINDIR%%\Cluster.

ANS27406E  Invalid Max Reconcile Process Number.
It must be a number between minimum number of max reconcile process and maximum number of max reconcile process. (both inclusive)
Explanation: Value of max reconcile process out of range.
System action: Show correct range of max reconcile process. The application aborts.
User response: Check the input value of max reconcile process.

ANS27407E  A file space was not in the search list (file: 'orphan file name'; file space: 'file space name'; server: 'server name'; user: 'user name').
Explanation: The file space name of this stub file was not in the search list for processing.
System action: Reconcile is not able to identify and delete obsolete objects in the missing file space.
User response: If reconcile should also delete obsolete objects from this file space, add the file space for complete processing.

ANS27408E  Reconcile aborted due to a removed volume in: 'volume mount point'.
Explanation: Hsmmonitor service was stopped and aborted the running reconciliation.
System action: Reconciliation of the volume has not entirely completed.
User response: During reconciliation do not remove any volumes. Doing so can create data loss.

ANS27409E  The resource type dlls are missing.
Explanation: The installation might not be completely.
The resource type dlls are missing.
System action: The application aborts.
User response: Make sure that the resource type dlls (HSMResTypDLL.dll and HSMResTypDLLEx.dll) were registered and copied into the right directory and check the log file for error details.

ANS27410W  Mount path no longer exists: 'mount path'
Explanation: A mount path disappeared configuring the mount path.
System action: The configuration of the mount path stays in registry, if it was already saved before. The dialog displays another mount path.
User response: Select the Cleanup button to interactively remove mount paths from the registry.

ANS27411E  Not enough memory.
Explanation: The application cannot allocate enough memory.
System action: The application aborts.
User response: Make sure that enough memory is available and check the log file for error details.

ANS27412E  The local host is not the owner of the reconcile configuration resource resource name.
Explanation: The application accessed a resource, which is does belong to the local host.
User response: Make sure that the resource belongs to the local host. Check the log file for error details.

ANS27413E  No access to a file or a directory: 'file name'.
Explanation: The process has no access to a file or a directory.
System action: Without access to all files, the operation cannot complete.
User response: Please check the access permissions of the file or the directory.

ANS27414E  No available file space.
Explanation: No available files space.
System action: The application aborts.
User response: You need to create at least one file space.

ANS27415E Cannot take resource 'resource name' offline.

Explanation: Taking the Microsoft cluster resource offline failed.

System action: The application aborts.

User response: Make sure that the resource belongs to the local host. Check the log file for error details.

ANS27416W Found an object of a pre TSM HSM 5.4.0 client: 'file name'.

Explanation: Pre TSM HSM 5.4.0 server objects are not processed by reconciliation.

System action: Reconciliation does not remove obsolete pre TSM HSM 5.4.0 server objects.

User response: Use the tool 'dsmReconConverter.exe' to upgrade these objects.

ANS27417E Cannot bring resource 'resource name' online.

Explanation: Bringing the Microsoft cluster resource online failed.

System action: The application aborts.

User response: Make sure that the resource belongs to the local host. Check the log file for error details.

ANS27418E Unable to open a enumeration handle.

Explanation: The application cannot open a handle to enumeration registered resource types.

System action: The application aborts.

User response: Check the log file for error details.

ANS27419E Unable to load required function 'function name' from 'dll name'.

Explanation: The application cannot load the required function from dll.

System action: The application aborts.

User response: Make sure that the dll exists and has not been modified.

ANS27420E Cannot open handle to 'resource name'.

Explanation: Opening the handle to Microsoft cluster resource failed.

System action: The application aborts.

User response: Make sure that the resource belongs to the local host. Check the log file for error details.

ANS27421E There is no data on the Tivoli Storage Manager Server 'server name' under user 'user name' for file: 'orphan file name' (file space: 'file space name').

Explanation: The process found an orphan file (no data on the Tivoli Storage Manager Server).

System action: The operation cannot be completed if any orphan stub file has been found.

User response: Replace the orphan stub file with the last backup version to solve the problem.

ANS27422E The time specified for the next reconciliation is not valid. The time must be at least 1 min in the future.

Explanation: The Next Reconcile time must be set at least 1 minute in the future. The time provided was prior to that time.

System action: Processing stops.

User response: Run the command again and select a new time, which is at least 1 minute in the future.

ANS27423E Failed to read command line arguments.

Explanation: Cannot allocate enough memory to save command line arguments.

System action: The application aborts.

User response: Please reserve enough memory for the application.

ANS27424E Reading Number of Max Reconcile Process failed.

Explanation: Reading max reconcile process number from registry failed.

System action: No max reconcile process read from registry. The application aborts.

User response: Check access permission of registry.

ANS27425E Reading volume configuration from registry failed.

Explanation: Reading volume configuration from registry failed.

System action: The application aborts.

User response: Check the log file for error details.

ANS27426E Reconcile aborted due to shutdown of hsmmonitor service. Volume: 'reconcile volume'.

Explanation: Hsmmonitor service was stopped and aborted the running reconciliation.

User response: Check the log file for error details.
System action: Reconciliation of the volume has not entirely completed.
User response: Reconciliation of this volume will be executed again when hsmmonitor service starts. No need to schedule an additional reconciliation.

ANS27427E Conversion aborts because of running reconciliation jobs.
Explanation: One or more reconciliation jobs are currently running.
User response: Wait until reconciliation jobs are finished before restating conversion.

ANS27428E Unable to register the resource type extension dll.
Explanation: The application cannot register the resource type extension dll.
System action: The application aborts.
User response: Make sure that the resource type extension dll exists under the %WINDIR%\Cluster and check the log file for error details.

ANS27429E Unable to register the resource type dll.
Explanation: The application cannot register the resource type dll.
System action: The application aborts.
User response: Make sure that the resource type dll exists under the %WINDIR%\Cluster and check the log file for error details.

ANS27430E Unexpected error. Saved configuration disappeared, mount path: 'mount path'
Explanation: The extension dialog cannot find a configuration after saving it. This is probably due to a manual registry manipulation.
System action: The mount path is not configured.
User response: Try to save the configuration again. If it fails again, check the log file for details or contact IBM Software Support.

ANS27431E Saving volume configuration failed.
Explanation: Saving volume configuration failed.
System action: No volume configuration will be saved into registry. The application aborts.
User response: Check access permission of registry and check the log file for details.

ANS27432E Could not restore the object ID of a file: 'orphan file name'.
Explanation: Restore of an external file object ID failed.
System action: The process ignores this problem and continues.
User response: Please check the access permissions of this file.

ANS27433E Setting Max Reconcile Process Number failed.
Explanation: Setting max reconcile process number failed.
System action: No max reconcile process number will be written in registry. The application aborts.
User response: Check access permission of registry.

ANS27434E Cannot set the value of NumberOfServerObjects of the resource 'resource name'.
Explanation: Setting the NumberOfServerObjects parameter of the Microsoft cluster resource failed.
System action: The application aborts.
User response: Make sure that the resource belongs to the local host. Check the log file for error details.

ANS27435E Cannot set value of ReconcileNow of the resource 'resource name'.
Explanation: Setting the ReconcileNow parameter of the Microsoft cluster resource failed.
System action: The application aborts.
User response: Make sure that the resource belongs to the local host. Check the log file for error details.

ANS27436E Cannot set value of a parameter of the resource 'resource name'.
Explanation: Setting the parameter of Microsoft cluster resource failed.
System action: The application aborts.
User response: Make sure that the resource belongs to the local host. Check the log file for error details.

ANS27437E Cannot set value of ReconcileRunning of the resource 'resource name'.
Explanation: Setting the ReconcileRunning parameter of the Microsoft cluster resource failed.
System action: The application aborts.
User response: Make sure that the resource belongs to
the local host. Check the log file for error details.

**ANS27438E** A program initialization problem occurred.

Explanation: Cannot start cluster features.
System action: The application aborts.
User response: Check the log file and contact IBM Software Support for help.

**ANS27439E** A program initialization problem occurred.

Explanation: Cannot start conversion.
System action: The application aborts.
User response: Check the log file and contact IBM Software Support for help.

**ANS27440E** A program initialization problem occurred.

Explanation: Cannot start domain controller.
System action: The application aborts.
User response: Check the log file and contact IBM Software Support for help.

**ANS27441E** A program initialization problem occurred.

Explanation: Cannot start storage.
System action: The application aborts.
User response: Check the log file and contact IBM Software Support for help.

**ANS27442E** An unexpected error occurred when terminating the program.

Explanation: An unexpected error occurred when stopping cluster features.
System action: The application continues.
User response: Check the log file and contact IBM Software Support for help.

**ANS27443E** An unexpected error occurred when terminating the program.

Explanation: An unexpected error occurred when stopping conversion.
System action: The application continues.
User response: Check the log file and contact IBM Software Support for help.

**ANS27444E** An unexpected error occurred when terminating the program.

Explanation: An unexpected error occurred when stopping domain controller.
System action: The application continues.
User response: Check the log file and contact IBM Software Support for help.

**ANS27445E** An unexpected error occurred when terminating the program.

Explanation: An unexpected error occurred when stopping driver.
System action: The application continues.
User response: Check the log file and contact IBM Software Support for help.

**ANS27446E** An unexpected error occurred when terminating the program.

Explanation: An unexpected error occurred when stopping logging.
System action: The application continues.
User response: Check the log file and contact IBM Software Support for help.

**ANS27447E** An unexpected error occurred when terminating the program.

Explanation: An unexpected error occurred when stopping storage.
System action: The application continues.
User response: Check the log file and contact IBM Software Support for help.

**ANS27448E** Syntax error or wrong parameter. Please check the usage.

Explanation: Syntax error or wrong parameter.
System action: Show command usage. The application aborts.
User response: Check the usage.

**ANS27449E** File space file space name is not available on the Tivoli Storage Manager server server name under user name node name

Explanation: One or more entries of the file space list do not exist on the Tivoli Storage Manager server.
System action: Processing stops.
User response: Check the specified file space list.
ANS27450E  An unexpected error occurred: unexpected error

Explanation: An unexpected error occurred (MFC exception).
System action: Operation or program aborts.
User response: Check the log file and contact IBM Software Support for help.

ANS27451E  An unknown unexpected error occurred.
Explanation: An unknown unexpected error occurred (unknown exception).
System action: Operation or program aborts.
User response: Check the log file and contact IBM Software Support for help.

ANS27452E  Uninstallation of resource type dlls failed.
Explanation: The application cannot uninstall resource type dlls.
System action: The application aborts.
User response: Check the log file for error details.

ANS27453W  The selected file spaces contain unknown file spaces: file space
Explanation: A mount path configured by another mount path has unknown file spaces.
System action: Unknown file spaces are in list together with known ones.
User response: Select mount path that configures this mount path and change the setting.

ANS27454W  Unknown file space not added to selection: file space
Explanation: A file space previously set in configuration now does not exist.
System action: File space is removed from list of selected file spaces in volume reconcile configuration.
User response: The change can be accepted with 'Apply' or 'Ok'. To avoid this message, a file space should be removed from all configurations before it is deleted.

ANS27455E  Unable to unregister the resource type extension dll.
Explanation: The application cannot unregister the resource type extension dll.
System action: The application aborts.
User response: Make sure that the resource type extension dll exists under the %WINDir%\Cluster and check the log file for error details.

ANS27456E  Unable to unregister the resource type dll.
Explanation: The application cannot unregister the resource type dll.
System action: The application aborts.
User response: Make sure that the resource type dll exists under the %WINDir%\Cluster and check the log file for error details.

ANS27457E  Found unresolved objects.
Explanation: Unresolved objects are found during file system scan.
System action: The operation cannot complete if any unresolved objects are detected.
User response: Please solve all problems with unresolved files and restart the process.

ANS27458E  Conversion failed of a pre TSM HSM 5.4.0 client object: 'file name'.
Explanation: An error occurred during conversion of a pre TSM HSM 5.4.0 client object.
System action: Conversion stops if any upgrade failed.
User response: Check the log file and contact IBM Software Support for help.

ANS27459E  Failure getting volume for UNC path: 'UNC path' Error description: error message
Explanation: The volume of an UNC path could not be determined.
System action: Reconciliation aborts.
User response: Make sure network connection is activated and properly configured.

ANS27460E  Failure analyzing B/A client trace file for backup failures: Trace file: 'TSM B-A client trace file name'
Explanation: The B/A client trace file cannot be exploited to analyze backup failures.
System action: No backup will be performed before file migration.
User response: Check the log file for a more detailed reason description.
ANS27461E Failure running TSM B/A client executable: originator error string

Explanation: The B/A client executable could not be run.

System action: No backup will be performed before file migration.

User response: Check the log files for more detailed information.

ANS27462E The TSM B/A client must not be configured to prompt interactively for a password. Option file: '%1'

Explanation: Migration job files with the backup before migration option cannot be processed correctly.

System action: No backup will be performed before file migration.

User response: Configure the B/A client to maintain the password automatically (PASSWORDACCESS=GENERATE).

ANS27463E No password access mode found in the TSM B/A client's option file. Option file: 'option file path'

Explanation: For migration job files with the backup before migrate option, the B/A client need be configured with password access generate.

System action: No backup will be performed before file migration.

User response: Configure the B/A client to maintain the password automatically (PASSWORDACCESS=GENERATE).

ANS27464E The currently installed Tivoli Storage Manager backup-archive client API version is not supported with HSM client version. You need to install at least backup-archive client version. You need to install at least backup-archive client version, but lower than version.

Explanation: The backup-archive client API version is too old or too new for the installed version of the HSM client.

System action: The currently installed backup-archive client API cannot be used by the HSM client.

User response: Install an appropriate version of the backup-archive client API.

ANS27465E Failure configuring target='configuration target string', key='configuration key', value='configuration value': error string

Explanation: The desired configuration changes could not be applied.

System action: The configuration has not been changed.

User response: Check if the specified target and the configuration key are valid and if the value is in range for the key.

ANS27466E The listing file 'listing file name' already exists.

Explanation: TSM HSM applications need to open a new listing file during startup. The listing file name is created based on the current time.

System action: The TSM HSM application terminates.

User response: Wait a moment and restart the desired operation.

ANS27467E Failure running migration for job file 'migration job file name': originator message

Explanation: The migration job did not run properly.

System action: The job was not run or canceled.

User response: Check the reason for the failed migration and correct the problem.

ANS27468E Failure opening listing file 'listing file name'

Explanation: TSM HSM applications need to open a new listing file during startup. The listing file name is created based on the current time.

System action: The TSM HSM application terminates.

User response: Make sure that the listing file directory is accessible and permissions are sufficient to write the listing file.

ANS27469E The log file 'log file name' could not be opened.

Explanation: TSM HSM applications need to open their log files during startup.

System action: The TSM HSM application terminates.

User response: Make sure that the log file is not locked by another application, and that no other reason, like missing access rights, prevents the TSM HSM application from opening the log file.
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Explanation</th>
<th>System action</th>
<th>User response</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS27470E</td>
<td>Failure retrieving content of stub file 'stub file path' from TSM server 'TSM server name', file space 'TSM server file space': error string</td>
<td>The stub file could not be restored from the TSM server.</td>
<td>The recall for the stub file will be canceled and the recalling user application will be released from waiting.</td>
<td>Check the log files for more detailed information. Check why the stub file could not be restored from TSM server.</td>
</tr>
<tr>
<td>ANS27480E</td>
<td>Reparse point read error of stub file: 'filename'.</td>
<td>The process could not read the reparse point data.</td>
<td>Without the reparse point data the operation cannot be completed.</td>
<td>Please check the file access permissions and that this file is a valid IBM TSM HSM for Windows stub with correct version.</td>
</tr>
<tr>
<td>ANS27481E</td>
<td>The multithreaded TSM B/A client API could not be initialized: TSM B-A client error message</td>
<td>The B/A client API reports an error during initialization. The TSM functionality cannot be used.</td>
<td>The TSM interface library will be unloaded.</td>
<td>Check the error message of the B/A client and solve the reported issue. Retry the desired operation.</td>
</tr>
<tr>
<td>ANS27482E</td>
<td>Failure analyzing B/A client audit trace file for backup failures: Audit trace file: audit trace file name Error message: error text</td>
<td>The B/A client audit trace file cannot be exploited for backup result analysis.</td>
<td>No backup will be performed before file migration, the migration will not be run without backup.</td>
<td>Check log file for a more detailed reason description.</td>
</tr>
<tr>
<td>ANS27483E</td>
<td>Failure while loading configuration values for the TSM B/A client: error text</td>
<td>The TSM HSM for Windows B/A client configuration is not valid.</td>
<td>The backup operation cannot be run.</td>
<td>Check error text and log file for a more detailed reason description. Correct the configuration or re-install the product and retry the desired operation.</td>
</tr>
<tr>
<td>ANS27485E</td>
<td>NTFS change journal has been truncated for volume 'volume name' while reconcile is running.</td>
<td>The NTFS change journal size was too small for all file system changes.</td>
<td>Process has been stopped to avoid a possible data loss because of the truncated NTFS change journal.</td>
<td>Increase the size of the NTFS change journal or choose a time with low user activity on the volume.</td>
</tr>
<tr>
<td>ANS27496E</td>
<td>The migration candidate file file name was recently modified.</td>
<td>A file was changed after scanning, Migration job rules may no longer apply.</td>
<td>The file will be excluded from migration.</td>
<td>Run the migration job once again. If the job filter criteria still apply to the file, it will be migrated then.</td>
</tr>
<tr>
<td>ANS27497E</td>
<td>The migration candidate file file name could not be write protected: error text</td>
<td>To protect against external modifications, migration candidate files are write locked before the actual migration. The lock operation failed for some reason.</td>
<td>The file will be excluded from migration.</td>
<td>Check the log files for the reason reported by the Windows system. Run the migration job once again.</td>
</tr>
<tr>
<td>ANS27498E</td>
<td>The file file name could not be backed up.</td>
<td>Backup failed for some file.</td>
<td>The file will be excluded from migration.</td>
<td>Check the B/A client log files for a more detailed reason description.</td>
</tr>
</tbody>
</table>
reason. If backup failed due to a global failure, also 
check the log files of the program you ran for 
migration.

ANS27499E Unknown backup result for file name, 
assuming backup failure.

Explanation: No backup result information could be 
found for a file during backup result analysis.

System action: A backup failure is assumed, and the 
file will be excluded from migration.

User response: Check the B/A client log files for a 
reason. If backup failed due to a global failure, also 
check the log files of the program you ran for 
migration.

ANS27500E The backup result analysis failed.

Explanation: The TSM HSM Client could not analyze 
backup results properly.

System action: To avoid that files that have not been 
backed up correctly are migrated, concerned files are 
not migrated.

User response: Check the log files of the program you 
rung for migration and the B/A Client log files. Ensure 
that the TSM B/A Client is executed with option 
-filesonly.

ANS27501E Failure running migration job 'migration 
job file name'; originator message

Explanation: The migration did not run properly.

System action: The migration was not run or 
canceled.

User response: Check the reason for the failed 
migration and correct the problem.

ANS27502E The job list file 'job file name' could not 
be found

Explanation: A migration job list file could not be 
found.

System action: The migration job list cannot be 
executed.

User response: Specify an existing job list file or create 
the missing job list file.

ANS27508E The list migration candidate file 'file 
name' listed in job 'job file name' at line 
line number could not be processed: error 
text

Explanation: A list migration job line, which is 
interpreted as a file name by the TSM HSM Client, 
could not be processed.

System action: The line in the list migration job file

will be skipped. The migration candidate file will be 
excluded from migration.

User response: Correct the list migration job file and 
run the migration job again.

ANS27579E The value name value must be in the 
range of minimum and maximum.

Explanation: The specified value was not valid.

System action: Show the correct range and abort.

User response: Check the validity of the specified 
parameter value.

ANS27580E The value name value must be set to yes 
or no.

Explanation: The specified value was not valid.

System action: Show the correct values.

User response: Check the validity of the specified 
parameter value.

ANS27581E The value name value must be set to 
choice 1, choice 2 or choice 3.

Explanation: The specified value was not valid.

System action: Show the correct values.

User response: Check the validity of the specified 
parameter value.

ANS27582E File space does not exist: 'file space name'.

Explanation: A file space with the specified name 
cannot be found.

System action: Abort command.

User response: Specify the name of an existing file 
space.

ANS27583E Threshold migration file space is not 
specified.

Explanation: The threshold migration file space name 
has not been specified.

System action: Abort command.

User response: Specify the name of an existing file 
space.

ANS27584E Threshold migration file space is not 
specified.

Explanation: To configure a mount path for threshold 
migration, the file space to be used must be specified, if 
the mount path is not configured for threshold 
migration yet.

System action: Abort command.
User response: Specify the name of an existing file space.

ANS27585E Setting Max Threshold Processes Number failed.

Explanation: Setting max threshold processes number failed.

System action: No max threshold processes number is be written to registry. The application aborts.

User response: Check access permission of registry.

ANS27590E Invalid Max Threshold Processes Number. It must be a number between minimum number of max threshold processes and maximum number of max threshold processes. (both inclusive)

Explanation: The value of max threshold processes is out of range.

System action: Show the correct range of max threshold processes. The application aborts.

User response: Check the input value of max threshold processes.

ANS27591E Reading Number of Max Threshold Processes failed.

Explanation: Reading max threshold processes number from registry failed.

System action: The max threshold processes value is not read from registry. The application aborts.

User response: Check access permission of registry.

ANS27627E Volume Mount Path: 'specified volume mount path' is not a valid configuration path.

Explanation: To be valid the path must point to a local, fixed NTFS/ReFS drive. Also the path must not contain recursively mounted volumes.

System action: Operation aborts.

User response: Specify a valid volume mount path.

ANS27663E Unknown file space detected in configuration: file space

Explanation: A mount path configured by another mount path has an unknown file space configured.

System action: The unknown file space is in the configuration.

User response: Select the mount path that configures this mount path and change the setting.

ANS27664E Unknown file space detected in configuration: file space

Explanation: A file space previously set in the configuration now does not exist.

System action: The file space is replaced by 'select file space' in the file space selection control.

User response: The change can be accepted with 'Apply' or 'Ok' after selecting a file space. To avoid this message, a file space should be removed from all configurations before it is deleted.

ANS27667E Failure validating registry keys: 'registry key' Error: 'error'

Explanation: Invalid reconciliation or threshold configuration data has been detected in registry.

System action: Processing stops.

User response: Contact IBM Software Support.

ANS27668E Low threshold value 'low threshold' cannot be bigger or equal high threshold value 'high threshold'

Explanation: Low threshold value is bigger or equal high threshold value.

System action: Operation aborts.

User response: Set correct low and/or high threshold value.

ANS27669E Running the TSM B/A client returns an error code as result code: error number

Explanation: The B/A client executable returns a global warning or error failure.

System action: The backup operation will be canceled.

User response: Check the B/A client log files for more detailed information.

ANS27681E Could not open handle for candidate list file 'file path'.

Explanation: The specified file is supposed to contain the list of candidates for Threshold Migration of the containing volume. If the file cannot be opened (with read and write access), threshold migration cannot work properly.

System action: File handle for the candidate list could not be opened. Threshold Migration will not be able to process this volume.

User response: Check the log file (hsmmonitor.log) for details. In particular, make sure the candidate list file is not read-only or locked by another process.
ANS27682E Could not create file mapping handle for file 'file path'.

Explanation: The specified file is supposed to contain the list of candidates for Threshold Migration of the containing volume. If this file cannot be mapped, threshold migration cannot work properly.

System action: File mapping object for the candidate list could not be created. Threshold Migration will not be able to process this volume.

User response: Check the log file (hsmmonitor.log) for details. In particular, make sure there is enough space for the candidate list file on the volume.

ANS27683W Could not grow candidate list file 'file path'.

Explanation: The candidate list file for Threshold Migration tried to reserve more space but failed. This may have impact on the task that requested to append items.

System action: Growing the candidate list terminated with a failure. The overall process will not be affected, but Threshold Migration might function suboptimally.

User response: Check the log file (hsmmonitor.log) for details. In particular, make sure there is enough space for the candidate list file on the volume.

ANS27684E Unable to unregister resource type dll, because there is still hsmmonitor configuration on the cluster.

Explanation: Unable to unregister resource type dll, because there is still reconcile and/or threshold migration configuration on the cluster.

System action: The application aborts.

User response: Delete all reconcile and threshold migration configurations on the cluster and try the operation again.

ANS27685E hsmmonitor service has stopped due to an error. Error is written to Windows event log.

Explanation: hsmmonitor service has been stopped with an error.

System action: Error is written to Windows event log. Scheduled reconcile and threshold migration tasks will not execute.

User response: Restart hsmmonitor service as soon as possible to assure that reconcile and threshold migration tasks will be processed.

ANS27686W hsmmonitor service has stopped.

Explanation: hsmmonitor service has been stopped.

System action: Scheduled reconcile and threshold migration tasks will not execute.

User response: Restart hsmmonitor service as soon as possible to assure that reconcile and threshold migration tasks will be processed.

ANS27687W hsmmonitor service has stopped with a warning. Warning is written to Windows event log.

Explanation: hsmmonitor service has been stopped with a warning.

System action: Warning is written to Windows event log. Scheduled reconcile and threshold migration tasks will not execute.

User response: Restart hsmmonitor service as soon as possible to assure that reconcile and threshold migration tasks will be processed.

ANS27688W service name is not yet running. Threshold Migration tasks will be delayed until it is running.

Explanation: The service is needed for threshold migration tasks to execute.

System action: Threshold migration tasks will be delayed until the service is running.

User response: If the service does not start automatically, start it manually. Otherwise simply wait until it has started.

ANS27689E Initialization of extension utility failed: error message

Explanation: Failure when initializing an extension utility.

System action: The application or the reconcile/threshold migration dialog aborts.

User response: Make sure application is running under an administrator account. Check the log file for error details.

ANS27690E The local host is not the owner of the hsmmonitor configuration resource resource name.

Explanation: The application accessed a resource, which does not belong to the local host.


User response: Make sure that the resource belongs to the local host. Check the log file for error details.
ANS27697E  An error occurred during file analysis: error text

Explanation: File streams could not be obtained or evaluated.
System action: The program terminates.
User response: Check file permissions and security settings.

ANS27701E  Failure recalling content of stub file 'stub file path' version=back end version number, requesting user: 'user name'; error string

Explanation: The offline file could not be recalled to the file system.
System action: The recall for the stub file is canceled and the recalling user application is released from waiting.
User response: Check the log files for more detailed information. Look for reasons why the stub file could not be restored from Tivoli Storage Manager server.

ANS27702E  The Tivoli Storage Manager options file 'optionsfile path' is not valid, as it does not specify all of the following required options: missing options string

Explanation: The option file does not work without the missing options.
System action: Actions that rely on the options file are cancelled.
User response: Specify a valid Tivoli Storage Manager options file or correct the errors in the current Tivoli Storage Manager options file.

ANS27709E  An error occurred during file analysis: error text

Explanation: File extended attributes operation failed (read, write, or delete).
System action: The program terminates.
User response: Check file permissions and security settings.

ANS27740E  Failure writing to listing file 'file name'

Explanation: The offline file could not be recalled to the file system.
System action: The HSM application terminates.
User response: Make sure that the listing file directory is accessible and permissions are sufficient to write the listing file.

ANS27744E  Failure opening deletion-hold transaction: error text

Explanation: The application could not open the transaction context for a deletion-hold operation on the Tivoli Storage Manager server.
System action: The file entry or the file entries are not protected against expiration on the Tivoli Storage Manager server. In case of a migration no stub files will be created.
User response: Check the log files for a reason code. Check Tivoli Storage Manager server permissions. Retry the operation.

ANS27745E  Failure sending deletion-hold events to Tivoli Storage Manager server 'Tivoli Storage Manager server name'; error text

Explanation: A file could not be protected or unprotected by a deletion-hold event on the Tivoli Storage Manager server.
System action: Operations that rely on the event are cancelled: Migration candidate files are not converted to stub files, back end entries are not deleted.
User response: Check the log files for a reason code. Check Tivoli Storage Manager server licenses and permissions. Retry the operation.

ANS27746E  Failure closing deletion-hold transaction: error text

Explanation: The application could not close the transaction context for a deletion-hold operation on the Tivoli Storage Manager server.
System action: The file entry or the file entries are not accessible on the Tivoli Storage Manager server. In case of a deletion files cannot be deleted.
User response: Check the log files for a reason code. Check Tivoli Storage Manager server permissions. Retry the operation.

ANS27786E  Failure deleting Tivoli Storage Manager server file object: error text

Explanation: The application could not delete a file on the Tivoli Storage Manager server.
System action: None. The operation continues with the next action.
User response: Check Tivoli Storage Manager server permissions. Retry the deletion operation.
**ANS27791E** Failure turning executable file *file name* into a stub file: error text

**Explanation:** The executable file has been stored on the Tivoli Storage Manager server. Turning the file into stub file failed as the Windows operating system has cached the image section of the file.

**System action:** The file is kept as is. File attributes and file times are recovered.

**User response:** The Windows operating system releases the cached file after an unpredictable time. If you need to migrate the file, unmount the volume or reboot. Then run the file migration again.

**ANS27811E** Failure sending retention-activate events to Tivoli Storage Manager server *Tivoli Storage Manager server name*: error text

**Explanation:** The retention period of a file could not be initiated by a retention-activate event on the Tivoli Storage Manager server.

**System action:** The retention period of the object is not activated. The object remains on the Tivoli Storage Manager server.

**User response:** Check the log files for a reason code. Check Tivoli Storage Manager server licenses and permissions. Retry the operation.

**ANS27813E** Failure starting the service *service name*: error text

**Explanation:** The service could not be initiated.

**System action:** The service is not available.

**User response:** Make sure that you have administrative rights. Check the log files for more information.

**ANS27814E** Failure stopping the service *service name*: error text

**Explanation:** The service could not be shut down due to some problem.

**System action:** The service does not shut down.

**User response:** Make sure that you have administrative rights. Check the log files for more information.

**ANS27879E** Failure turning executable file *file name* into a stub file: error text

**Explanation:** The file has been stored on the Tivoli Storage Manager server. Turning the file into stub file failed as the Windows operating system keeps the file opened.

**System action:** The file is kept as is. File attributes and file times are recovered.

**ANS27882E** The modified stub file *file name* could not be located on the Tivoli Storage Manager server *Tivoli Storage Manager server name*.

**Explanation:** The stub file could not be found on the Tivoli Storage Manager server. The HSM migration task cannot update the stub file on the Tivoli Storage Manager server.

**System action:** The modified stub file was not updated on the Tivoli Storage Manager server.

**User response:** Restore the file from a backup copy, or delete the stub file.

**ANS27883E** The backup configuration file *config file name* could not be found or is not a file.

**Explanation:** The backup-archive client options file could not be found or is not a valid file.

**System action:** The backup-before-migrate operations will not be performed and the files will not be migrated to the Tivoli Storage Manager.

**User response:** Create a new backup-archive options file or correct the path to the options file you want to specify.

**ANS27888E** Options file is not valid:backup options file. Please, select a valid backup option file.

**Explanation:** The specified file is not a valid options file for the backup-archive client.

**System action:** Processing stops.

**User response:** Select a valid options file.

**ANS27889E** Management class is not valid *management class*. Select a valid management class.

**Explanation:** The HSM client was not able to find the specified management class in the list of the available management classes of this node.

**System action:** Processing stops.

**User response:** Select a valid management class.

**ANS27890E** *management class* management class selected for volume *volume* does not belong to the domain of your node.

**Explanation:** The management class that is selected...

Chapter 2. HSM for Windows client messages 23
for the volume does not belong to domain of your node.

**System action:** Processing stops.

**User response:** Select another management class for the volume. Select a management class for the domain of your node. To see available management classes for your node, run `dsmclc listmgmtclasses`.

ANS27897E A backup options file is specified, but you did not choose to back up files before migration.

**Explanation:** You can only specify an options file if you also choose to back up files before migration.

**System action:** Processing stops.

**User response:** Select the option to back up files before migration.

ANS27898W Low threshold for volume volume could not be reached. Current disk usage disk usagepercent.

**Explanation:** Threshold migration was not able to migrate enough files to reach low threshold. There might be resident files available for migration, but these files do not match the criteria for migration such as file age or file size.

**System action:** Monitor continues work.

**User response:** Check the minimum file age and size that you configured for threshold migration candidates.

ANS27899W Backup before migrate has been deactivated. The backup option file remains selected, but is not used during migration.

**Explanation:** Option file is ignored.

**System action:** Operation has finished successfully.

**User response:** None

ANS27900W Management class management class name has finite retention period of number days.

**Explanation:** A management class with finite retention is selected. Objects are automatically removed from the Tivoli Storage Manager Server after number days.

**System action:** N/A

**User response:** If you want to ensure that data is not automatically removed from the Tivoli Storage Manager server, select a management class with an unlimited retention period or with an event-based retention period.

ANS27901W Management class class name does not exist on domain. Default management class has been used.

**Explanation:** The configured management class does not exist on domain. Default management class has been used.

**System action:** Operation has finished successfully.

**User response:** None

ANS27902W Option file file name does not exist. Default option file has been used.

**Explanation:** The configured option file does not exist. Default option file has been used.

**System action:** Operation has finished successfully.

**User response:** None

ANS27914E The configured management class for threshold migration of volume volume name is not valid.

**Explanation:** The configured management class is not available for the HSM client node. Thus this management class cannot be used for threshold migration.

**System action:** Operation aborts.

**User response:** Select a valid management class or unconfigure threshold migration for this volume.

ANS27915E The configured option file for back up before migration for threshold migration of volume volume name is not valid.

**Explanation:** The configured option file for back up before migration does not exist. Thus this option file cannot be used for threshold migration.

**System action:** Operation aborts.

**User response:** Select a valid option file for back up before migration or unconfigure threshold migration for this volume.

ANS28154E Failure validating job file 'job file name': specific error text

**Explanation:** The job file could not be validated.

**System action:** The migration job is not performed.

**User response:** Check the log file to find the specific problems or re-create the job from scratch.
ANS28157E Deletion of objects on remote TSM server being matched by string or pattern 'string or pattern' is not permitted.

Explanation: The HSM client does not delete objects that belong to remote file servers.

System action: The addressed objects on the Tivoli Storage Manager server are not deleted.

User response: Delete the desired objects using the HSM client on the file server from which the objects were migrated.

ANS28165E No configuration was found for Tivoli Storage Manager server 'server name', node 'node name'.

Explanation: The Tivoli Storage Manager HSM client could not find the configuration required to connect to a Tivoli Storage Manager server.

System action: Actions that rely on the configuration are not performed.

User response: Define a valid configuration for the Tivoli Storage Manager server, then retry the operation.

ANS28267W The existing file 'file name' was not overwritten.

Explanation: The IBM Tivoli Storage Manager HSM Client did not overwrite an existing file on the file system.

System action: The file, that was not overwritten, is being skipped and the current operation continues.

User response: Remove the file and retry the operations, or specify option -f to force overwrite.

ANS28268E The file or directory 'file or directory name' could not be accessed.

Explanation: The Tivoli Storage Manager HSM Client could not access a file or directory on the file system.

System action: The operation is not executed.

User response: Make sure that the file or directory exists. Grant the required permissions to the file or directory, or switch to a user who owns the rights.

ANS28269E The reparse data of the stub file 'stub file name' could not be accessed.

Explanation: The Tivoli Storage Manager HSM client could not access reparse data of the stub file on the file system.

System action: The file not moved. A message is logged to the administrative log file.

User response: Grant the required permissions to the file or directory, or switch to a user account that has the required permissions.
ANS28291E  The stub file 'file name' is already in state moving.

**Explanation:** The stub file has already been moved by the user, and its content data is still located on the remote Tivoli Storage Manager server.

**System action:** The file is not moved. A message is logged to the administrative log file.

**User response:** Wait until the HSM tasks service has finished moving the content data of the stub file. Retry the move operation.

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ANS28292E  The source stub file 'file name' could not be opened.

**Explanation:** The IBM Tivoli Storage Manager HSM Client could not open the source stub file for moving.

**System action:** The file is not moved. A message is logged to the administrative log file.

**User response:** Grant the required permissions to the stub file, directory, or file share or switch to a user account that has the required permissions.

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ANS28293E  Remote SSAM Tivoli Storage Manager servers are not supported.

**Explanation:** The Tivoli Storage Manager HSM client does not support SSAM remote servers. The HSM client cannot delete objects on SSAM servers.

**System action:** The remote Tivoli Storage Manager server connection is denied. A message is logged to the administrative log file.

**User response:** Do not move stub files from Tivoli Storage Manager SSAM servers.

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ANS28315W  The content data of the moved stub file 'stub file name' could not be deleted from the remote Tivoli Storage Manager server 'TSM server name'; error text.

**Explanation:** The stub file and its content data have been successfully moved to the target location, but the HSM client could not delete the stub content data on the remote server.

**System action:** The stub content data is left on the remote Tivoli Storage Manager server.

**User response:** Run the reconciliation service on the remote file server to delete remaining stub file data.

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ANS28316E  Moving the content of stub file 'stub file name' failed; error text.

**Explanation:** The prerequisites required to move the content could not be processed.

**System action:** The content of the stub file is not moved. The stub file can still be recalled from the remote Tivoli Storage Manager server.

**User response:** Check the log file for possible causes. Retry the operation after the problem is fixed.

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ANS28317E  Moving the content of stub file 'stub file name' failed; error text.

**Explanation:** Moving the content data of the stub file from the remote Tivoli Storage Manager server to the local Tivoli Storage Manager server failed.

**System action:** The content of the stub file is not moved. The stub file can still be recalled from the remote Tivoli Storage Manager server.

**User response:** Check the log file for possible causes. Retry the operation after the problem is fixed.

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ANS28318W  The stub file 'file name' was not moved.

**Explanation:** The migrated object that corresponds to the stub file was not found on the Tivoli Storage Manager server.

**System action:** The stub file not moved. A message is logged to the administrative log file.

**User response:** Check the log file for possible causes. If the file content does not exist on the Tivoli Storage Manager server use the reconciliation service to process orphaned stub files.

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ANS28319E  The stub file 'file name' was not moved due to the following reason: error string

**Explanation:** An error occurred when the HSM client tried to move the stub file. The reason for the error is identified.

**System action:** The stub file not moved. A message is logged to the administrative log file.

**User response:** Check the log file for possible causes. Correct the problem and retry the operation.

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ANS28325E  Failure writing file name container for reconciliation; file name. The current file size is (file size KB).

**Explanation:** Reconcile file name container could not be written. The file is used to store information during reconciliation.

**System action:** Reconcile is canceled for this volume.

**User response:** Make sure that there is enough free space on the volume to create the file. The free space should be at least twice the current file size.
ANS28326E Failure reading file name container for reconciliation: file name
Explanation: Reconcile file name container could not be read. The file is used to store information during reconciliation.
System action: Reconcile is canceled for this volume.
User response: Check the log files for detailed information.

ANS28327E Infinite loop is determined during reconciliation of volume volume name while deleting objects on Tivoli Storage Manager server.
Explanation: An error occurred while reconciliation tried to delete a server object.
System action: Processing stops.
User response: Try to run reconciliation again. If the problem persists, contact IBM Software Support.

ANS28328E Remote Tivoli Storage Manager server connection connection pair is already configured for reconcile of volume volume name.
Explanation: You attempted to configure the same remote Tivoli Storage Manager server connection a second time.
System action: The configuration is canceled.
User response: Check command input and retry the operation.

ANS28330W The remote server connection pairs in the list for volume volume name are not unique.
Explanation: There are two remote servers with the same connection pair.
System action: The duplicated name was deleted. Operation continues.
User response: No user response is necessary.

ANS28331E The connection pair connection pair cannot be added.
Explanation: The connection cannot be added to the configuration because no dsm.opt file for this pair exists.
System action: The configuration is canceled.
User response: Check the specified connection pair.

ANS28332E Cannot remove the connection pair connection pair.
Explanation: The connection pair was not configured for reconcile. It cannot be removed.
System action: Processing stops.
User response: Check the specified connection pair.

ANS28339E Remote Tivoli Storage Manager server configurations are not available.
Explanation: No available remote Tivoli Storage Manager servers are found.
System action: Processing stops.
User response: Check for other error messages. Check the connections in the Remote Tivoli Storage Manager Server Connections window.

ANS28340E Cannot create cluster resource 'resource name'.
Explanation: Create Microsoft cluster resource failed.
System action: Processing stops.
User response: Make sure that the resource belongs to the local host. Check the log file for error details.

ANS28343E Failed to import configuration of volumes volume names using import file import file name.
Explanation: It was not possible to import the configuration for the volumes volume names during installation. The volumes were not accessible. The import file import file name was used for the operation.
System action: The installation continues.
User response: Ensure that the volumes are accessible and configure the volume manually by either using the GUI or the command line tool dsmhsmclc.

ANS28344E Volume volume name is not configured for reconcile and you cannot add a remote Tivoli Storage Manager servers.
Explanation: It is not possible to add or delete a remote Tivoli Storage Manager server if the volume is not configured for reconciliation.
System action: The operation is stopped.
User response: If you want to add a remote Tivoli Storage Manager server, you must configure the volume for reconciliation.
ANS28345W  The remote Tivoli Storage Manager server (server: 'remote Tivoli Storage Manager server name', user: 'user name') is not in the search list. File 'stub file name' is not processed.

Explanation: The remote Tivoli Storage Manager server is not part of the reconciliation configuration. Stub files in state moving that are migrated to this Tivoli Storage Manager server are skipped during processing.

System action: Fewer objects are processed by the operation. Processing continues.

User response: If objects on the remote Tivoli Storage Manager server should be reconciled, add the remote Tivoli Storage Manager server to the reconciliation settings for the volume.

ANS28346E  No data on the Tivoli Storage Manager Server found for file: 'orphan file name' (file space: 'file space name', server: 'server name', user: 'user name').

Explanation: The process found an orphan file (no data on the Tivoli Storage Manager Server).

System action: The operation cannot be completed if any orphan stub file has been found.

User response: Please replace the orphan stub file with the last backup to solve the problem.

ANS28349E  No suitable management class for private HSM for Windows objects was found.

Explanation: The Tivoli Storage Manager HSM client stores and maintains private data on the Tivoli Storage Manager. For this purpose a management class, that does not expire data, is required.

System action: The data is not stored on the Tivoli Storage Manager server. The current operation is canceled.

User response: Create and activate a management class on the Tivoli Storage Manager server. Use a time based management class with infinite retention period (preferred), or a event based management class. Retry the operation.

ANS28350E  Reconciliation on volume volume name was stopped as the volume mapping has been changed.

Explanation: The hardware volume mapping has been changed during running reconciliation. Reconciliation has been stopped.

System action: Reconciliation was stopped for this volume. Reconciliation will be started again at the next scheduled time.

ANS28408W  Domain controllers cannot be contacted or initialized: error text

Explanation: The HSM client cannot contact or cannot initialize one or more domain controllers. HSM client functions might be limited.

System action: Processing continues. The domain controllers are omitted. If missing domain controllers cause problems a more specific message log message will be written.

User response: Check error text and log file for a more detailed reason description. Correct the problem and start HSM for Windows again.

ANS28427E  Failed creating a VSS backup component for volume volume name.

Explanation: An error occurred while HSM Monitor running reconcile tried to create a VSS backup component.

System action: Reconciliation of the volume volume name is skipped.

User response: Try to fix VSS problem and try reconciliation again. Look for clues to the VSS problem in the hsmmonitor-admin.log file and in the hsmmonitor.log file. For information about Tivoli Storage Manager and VSS, see the Tivoli Storage Manager Backup-Archive Clients Installation and User's Guide. See also the Tivoli Storage Manager Problem Determination Guide. See the information about using Windows Volume Shadow Copy Services in these sections:

- Defining VSS transient errors
- Gathering VSS diagnostic information for Microsoft assistance
- Troubleshooting errors using a VSS trace
- Running VSS API calls with the vsreq.exe sample program

ANS28428E  Failed creating a VSS snapshot for volume volume name.

Explanation: An error occurred while HSM Monitor running reconcile tried to create a VSS snapshot.

System action: Reconciliation of the volume volume name is skipped.

User response: Try to fix VSS problem and try reconciliation again. Look for clues to the VSS problem in the hsmmonitor-admin.log file and in the hsmmonitor.log file. For information about Tivoli Storage Manager and VSS, see the Tivoli Storage Manager Backup-Archive Clients Installation and User's Guide. See also the Tivoli Storage Manager Problem Determination Guide. See the information about using Windows Volume Shadow Copy Services in these sections:
Windows Volume Shadow Copy Services in these sections:
- Defining VSS transient errors
- Gathering VSS diagnostic information for Microsoft assistance
- Troubleshooting errors using a VSS trace
- Running VSS API calls with the vsreq.exe sample program

**ANS28429E Failed to initialize the VSS library or to set the COM security.**

**Explanation:** An error occurred while HSM Monitor running reconcile tried to load vssapi.dll or to set the COM security parameters.

**System action:** Reconciliation for the volume is skipped.

**User response:** Try to fix VSS problem and try reconciliation again. Look for clues to the VSS problem in the hsmmonitor-admin.log file and in the hsmmonitor.log file. For information about Tivoli Storage Manager and VSS, see the Tivoli Storage Manager Backup-Archive Clients Installation and User's Guide. See also the Tivoli Storage Manager Problem Determination Guide. See the information about using Windows Volume Shadow Copy Services in these sections:
- Defining VSS transient errors
- Gathering VSS diagnostic information for Microsoft assistance
- Troubleshooting errors using a VSS trace
- Running VSS API calls with the vsreq.exe sample program

**ANS28430E Failed to expose of the snapshot for volume volume_name.**

**Explanation:** An error occurred while HSM Monitor running reconcile tried to load vssapi.dll.

**System action:** The application continues, but this reconcile run is stopped. Monitor will try reconciliation again with the next start of reconciliation.

**User response:** Look to the hsmmonitor.log to determine the problem.

**ANS28431E Drive letter drive_letter is already used for a snapshot exposition.**

**Explanation:** An error occurred while HSM Monitor running reconcile tried to load vssapi.dll.

**System action:** The application continues, but this reconcile run is stopped. Monitor will try reconciliation again with the next start of reconciliation.

**User response:** Unexpose the snapshot on the drive or set another letter to expose.

**ANS28434E Failed to import configuration of volume volume_name.**

**Explanation:** It was not possible to import the configuration for volume volume_name during installation. The volume was not accessible. For example it may be a cluster volume is online on another node. There may be other reasons.

**System action:** The installation continues without configuring the volume for reconciliation or threshold migration.

**User response:** The volume was configured for reconciliation or/and threshold migration with a previous installation of HSM for Windows. Ensure that the volume is accessible and configure the volume manually by either using the GUI or the command line tool dsmhsmc.

**ANS28436W Threshold migration will be started again because configuration is updated.**

**Explanation:** Threshold migration configuration is updated. The new configuration becomes active only after threshold migration is stopped and started again. Threshold migration is automatically stopped and started again.

**System action:** Threshold migration is stopped and automatically started again.

**User response:** No user action is required.

**ANS28438W A user or group query to domain controller 'controller name' failed with error text: error text**

**Explanation:** The requested user or group information could not be obtained from the domain controller.

**System action:** The user or group information is not available.

**User response:** Make sure that the domain controller is available and repeat the operation.

**ANS28444E The device device_name is not ready.**

**Explanation:** The snapshot was deleted or VSS service was stopped during snapshot scan.

**System action:** The application continues, but this reconciliation run is stopped. Monitor will try reconciliation again with the next start of reconciliation.

**User response:** Try to determine the reason for external snapshot deletion or VSS service stopping. Run reconciliation again.
ANS28448W Recall quotas, that are assigned to domain local groups, are no longer supported since HSM client V6.4.

Explanation: Domain local groups are not suitable for quota calculations as the Windows operating system does not pass domain local security identifiers to the HSM recall driver in some domain configurations.

System action: Domain local group quotas are no longer available. The HSM client recall service ignores domain local recall quotas when it calculates recall permissions. The HSM client GUI will remove domain local quota definitions when a new recall quota configuration file is written.

User response: Use domain global groups, computer local groups, or users for recall quota definition.

ANS28504W The file ‘file name’ could not be located on the file system.

Explanation: The file could not be found on the file system. The HSM client cannot migrate the file.

System action: The file was not migrated to the Tivoli Storage Manager server.

User response: Specify a file that exists on the file system.

ANS28505W The file ‘file name’ is locked by another application.

Explanation: The file cannot be accessed because it is locked by another application. The HSM client cannot migrate the file.

System action: The file was not migrated to the Tivoli Storage Manager server.

User response: Make sure that the stub file is not locked by another application and try to migrate the file again.

ANS28503W The stub file ‘file name’ is locked by another application.

Explanation: The stub file cannot be accessed because it is locked by another application. The HSM client cannot restore the file.

System action: The file was not restored from the Tivoli Storage Manager server.

User response: Make sure that the stub file is not locked by another application and try to recall the stub file again.

ANS28517E The management class ‘management class name’ does not exist.

Explanation: The management class does not exist on the Tivoli Storage Management server.

System action: The operation cannot be performed due to a missing management class.

User response: Specify an existing management class for the desired operation.

ANS28501E The stub file ‘file name’ could not be located on the Tivoli Storage Manager server ‘Tivoli Storage Manager server name’.

Explanation: The stub file could not be found on the Tivoli Storage Manager server. The HSM client cannot restore the stub file from the Tivoli Storage Manager server.

System action: The stub file was not restored on the file system.

User response: Restart the HSM GUI and retry the operation. If the problem still exists, check dsmgui-admin.log and dsmgui.log files or contact IBM Software Support.

ANS28502W The stub file ‘file name’ could not be located on the file system.

Explanation: The stub file could not be found on the file system. The HSM client cannot restore the stub file.

System action: The stub file was not restored on the file system.

User response: Restore the file from a backup copy, or delete the stub file.
Appendix A. Tivoli support information

You can find support information for Tivoli and other IBM products from various sources.

From the IBM Support Portal at [http://www.ibm.com/support/entry/portal/] you can select the products that you are interested in and search for a wide variety of relevant information.

Communities and other learning resources

In addition to product documentation, many forms of assistance are available to help you get started as you deploy and use the Tivoli Storage Manager family of products. These resources can also help you to solve problems that you might have.

You can use forums, wikis, and other social media tools to ask questions, talk to experts, and learn from others.

User groups

**Tivoli Global Storage Virtual User Group**

Access this user group at [http://www.tivoli-ug.org/storage]

This group makes it possible for individuals from many different industries and types of organizations to share information and work directly with the IBM product experts. Local chapters also exist where members meet in person to share experiences and hear from guest speakers.

**ADSM.ORG**

Access this mailing list at [http://adsm.org]

This independently managed Storage Management discussion forum started when Tivoli Storage Manager was known as ADSTAR Distributed Storage Manager (ADSM). The members of this forum have many years of experience with Tivoli Storage Manager in almost every type of IT environment.

To subscribe to the forum, send an email to listserv@vm.marist.edu. The body of the message must contain the following text: SUBSCRIBE ADSM-L your_first_name your_family_name.

**Tivoli Storage Manager community on Service Management Connect**

Access Service Management Connect at [http://www.ibm.com/developerworks/servicemanagement] In the Storage Management community of Service Management Connect, you can connect with IBM in the following ways:

- Become involved with transparent development, an ongoing, open engagement between users and IBM developers of Tivoli products. You can access early designs, sprint demonstrations, product roadmaps, and prerelease code.
- Connect one-on-one with the experts to collaborate and network about Tivoli and the Tivoli Storage Manager community.
- Read blogs to benefit from the expertise and experience of others.
• Use wikis and forums to collaborate with the broader user community.

**Tivoli Storage Manager wiki on developerWorks®**


Find the latest best practices, white papers, and links to videos and other resources. When you log on, you can comment on content, or contribute your own content.

**Tivoli Support Technical Exchange**


Learn from technical experts who share their knowledge and then answer your questions. The sessions are designed to address specific technical issues and provide in-depth but narrowly focused training.

**Other social media sites**

LinkedIn

You can join groups on LinkedIn, a social media site for professionals. For example:

• **Tivoli Storage Manager Professionals**: [http://www.linkedin.com/groups/Tivoli-Storage-Manager-Professionals-54572](http://www.linkedin.com/groups/Tivoli-Storage-Manager-Professionals-54572)

• **TSM**: [http://www.linkedin.com/groups?gid=64540](http://www.linkedin.com/groups?gid=64540)

Twitter

Follow @IBMStorage on Twitter to see the latest news about storage and storage software from IBM.

**Tivoli education resources**

Use these education resources to help you increase your Tivoli Storage Manager skills:

**Tivoli Education and Certification website**


Use the Search for Training link to find local and online offerings of instructor-led courses for Tivoli Storage Manager.

**Education Assistant**

Access resources at [http://publib.boulder.ibm.com/infocenter/ieduasst/tivv1r0/index.jsp](http://publib.boulder.ibm.com/infocenter/ieduasst/tivv1r0/index.jsp)

Scroll to view the list of available training videos. Recorded product demonstrations are also available on a YouTube channel.
Searching knowledge bases

If a problem occurs while you are using one of the Tivoli Storage Manager family of products, you can search several knowledge bases.

Begin by searching the Tivoli Storage Manager Information Center at [http://pic.dhe.ibm.com/infocenter/tsminfo/v7r1](http://pic.dhe.ibm.com/infocenter/tsminfo/v7r1). Within the information center, you can enter words, phrases, or message numbers in the Search field to find relevant topics.

Searching the Internet

If you cannot find an answer to your question in the Tivoli Storage Manager information center, search the Internet for the information that might help you resolve the problem.

To search multiple Internet resources, go to the IBM support website at [http://www.ibm.com/support/entry/portal/](http://www.ibm.com/support/entry/portal/). You can search for information without signing in.

Sign in using your IBM ID and password if you want to customize the site based on your product usage and information needs. If you do not already have an IBM ID and password, click Sign in at the top of the page and follow the instructions to register.

From the support website, you can search various resources:
- IBM technotes.
- IBM downloads.
- IBM Redbooks® publications.
- IBM Authorized Program Analysis Reports (APARs). Select the product and click Downloads to search the APAR list.

Using IBM Support Assistant

IBM Support Assistant is a complimentary software product that can help you with problem determination. It is available for some Tivoli Storage Manager and Tivoli Storage FlashCopy Manager products.

IBM Support Assistant helps you gather support information when you must open a problem management record (PMR), which you can then use to track the problem. The product-specific plug-in modules provide you with the following resources:
- Support links
- Education links
- Ability to submit problem management reports

You can find more information and download the IBM Support Assistant web page at [http://www.ibm.com/software/support/isa](http://www.ibm.com/software/support/isa).

Finding product fixes

A product fix to resolve a software problem might be available from the IBM software support website.

Procedure

Determine what fixes are available by checking the IBM software support website at [http://www.ibm.com/support/entry/portal/](http://www.ibm.com/support/entry/portal/).

If you previously customized the site based on your product usage:
1. Click the link for the product, or a component for which you want to find a fix.
2. Click Downloads, and then click Search for recommended fixes.

If you have not previously customized the site:
Click Downloads and search for the product.

Receiving notification of product fixes

You can receive notifications about fixes, flashes, upgrades, and other news about IBM products.

Procedure

1. From the support page at [http://www.ibm.com/support/entry/portal/](http://www.ibm.com/support/entry/portal/), click Sign in and sign in using your IBM ID and password. If you do not have an ID and password, click register now and complete the registration process.
2. Click Manage all my subscriptions in the Notifications pane.
3. Click the Subscribe tab, and then click Tivoli.
4. Select the products for which you want to receive notifications and click Continue.
5. Specify your notification preferences and click Submit.

Contacting IBM Software Support

You can contact IBM Software Support if you have an active IBM subscription and support contract, and if you are authorized to submit problems to IBM.

Procedure

1. Ensure that you have completed the following prerequisites:
   a. Set up a subscription and support contract.
   b. Determine the business impact of the problem.
   c. Describe the problem and gather background information.
2. Follow the instructions in “Submitting the problem to IBM Software Support” on page 36.
Setting up and managing support contracts

You can set up and manage your Tivoli support contracts by enrolling in IBM Passport Advantage®. The type of support contract that you need depends on the type of product you have.

Procedure

Enroll in IBM Passport Advantage in one of the following ways:


- **By telephone:** For critical, system-down, or high-severity issues, you can call 1-800-IBMSERV (1-800-426-7378) in the United States. For the telephone number to call in your country, go to the IBM Software Support Handbook web page at [http://www14.software.ibm.com/webapp/set2/sas/f/handbook/home.html](http://www14.software.ibm.com/webapp/set2/sas/f/handbook/home.html) and click Contacts.

Determining the business impact

When you report a problem to IBM, you are asked to supply a severity level. Therefore, you must understand and assess the business impact of the problem you are reporting.

<table>
<thead>
<tr>
<th>Severity level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity 1</td>
<td><strong>Critical</strong> business impact: You are unable to use the program, resulting in a critical impact on operations. This condition requires an immediate solution.</td>
</tr>
<tr>
<td>Severity 2</td>
<td><strong>Significant</strong> business impact: The program is usable but is severely limited.</td>
</tr>
<tr>
<td>Severity 3</td>
<td><strong>Some</strong> business impact: The program is usable with less significant features (not critical to operations) unavailable.</td>
</tr>
<tr>
<td>Severity 4</td>
<td><strong>Minimal</strong> business impact: The problem causes little impact on operations, or a reasonable circumvention to the problem has been implemented.</td>
</tr>
</tbody>
</table>

Describing the problem and gathering background information

When explaining a problem to IBM, it is helpful to be as specific as possible. Include all relevant background information so that IBM Software Support specialists can help you solve the problem efficiently.

To save time, know the answers to these questions:

- What software versions were you running when the problem occurred?
- Do you have logs, traces, and messages that are related to the problem symptoms? IBM Software Support is likely to ask for this information.
- Can the problem be re-created? If so, what steps led to the failure?
- Have any changes been made to the system? For example, hardware, operating system, networking software, and so on.
- Are you using a workaround for this problem? If so, be prepared to explain it when you report the problem.
Submitting the problem to IBM Software Support

You can submit the problem to IBM Software Support online or by telephone.

Online

Go to the IBM Software Support website at [http://www.ibm.com/support.entry/portal/Open_service_request/Software/Software_support_(general)](http://www.ibm.com/support.entry/portal/Open_service_request/Software/Software_support_(general)). Sign in to access IBM Service Requests and enter your information into the problem submission tool.

By telephone

Appendix B. Accessibility features for the Tivoli Storage Manager product family

Accessibility features help users who have a disability, such as restricted mobility or limited vision to use information technology products successfully.

Accessibility features

The IBM Tivoli Storage Manager family of products includes the following accessibility features:

- Keyboard-only operation using standard operating-system conventions
- Interfaces that support assistive technology such as screen readers

The command-line interfaces of all products in the product family are accessible.

Tivoli Storage Manager Operations Center provides the following additional accessibility features when you use it with a Mozilla Firefox browser on a Microsoft Windows system:

- Screen magnifiers and content zooming
- High contrast mode

The Operations Center and the Tivoli Storage Manager Server can be installed in console mode, which is accessible.

The Tivoli Storage Manager Information Center is enabled for accessibility. For information center accessibility information, see “Accessibility features in the information center” ([http://pic.dhe.ibm.com/infocenter/tsinfo/v7r1/topic/com.ibm.help.ic.doc/iehs36_accessibility.html](http://pic.dhe.ibm.com/infocenter/tsinfo/v7r1/topic/com.ibm.help.ic.doc/iehs36_accessibility.html)).

Vendor software

The Tivoli Storage Manager product family includes certain vendor software that is not covered under the IBM license agreement. IBM makes no representation about the accessibility features of these products. Contact the vendor for the accessibility information about its products.

IBM and accessibility

See the IBM Human Ability and Accessibility Center ([http://www.ibm.com/able](http://www.ibm.com/able)) for information about the commitment that IBM has to accessibility.
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Glossary

This glossary provides terms and definitions for Tivoli Storage Manager, Tivoli Storage FlashCopy Manager, and associated products.

The following cross-references are used in this glossary:

- See refers you from a nonpreferred term to the preferred term or from an abbreviation to the spelled-out form.
- See also refers you to a related or contrasting term.

For other terms and definitions, see the IBM Terminology website at [www.ibm.com/software/globalization/terminology](http://www.ibm.com/software/globalization/terminology).

A

**absolute mode**
In storage management, a backup copy-group mode that specifies that a file is considered for incremental backup even if the file has not changed since the last backup. See also mode, modified mode.

**access control list (ACL)**
In computer security, a list associated with an object that identifies all the subjects that can access the object and their access rights.

**access mode**
An attribute of a storage pool or a storage volume that specifies whether the server can write to or read from the storage pool or storage volume.

**ACK**
See acknowledgment.

**acknowledgment (ACK)**
The transmission of acknowledgment characters as a positive response to a data transmission.

**ACL**
See access control list.

**activate**
To validate the contents of a policy set and then make it the active policy set.

**active-data pool**
A named set of storage pool volumes that contain only active versions of client backup data. See also server storage pool, storage pool volume.

**active file system**
A file system to which space management has been added. With space management, tasks for an active file system include automatic migration, reconciliation, selective migration, and recall. See also inactive file system.

**active policy set**
The activated policy set that contains the policy rules currently in use by all client nodes assigned to the policy domain. See also policy domain, policy set.

**active version**
The most recent backup copy of a file stored. The active version of a file cannot be deleted until a backup process detects that the user has either replaced the file with a newer version or has deleted the file from the file server or workstation. See also backup version, inactive version.

**activity log**
A log that records normal activity messages that are generated by the server. These messages include information about server and client operations, such as the start time of sessions or device I/O errors.

**adaptive subfile backup**
A type of backup that sends only changed portions of a file to the server, instead of sending the entire file. Adaptive subfile backup reduces network traffic and increases the speed of the backup.

**administrative client**
A program that runs on a file server, workstation, or mainframe that administrators use to control and monitor the server. See also backup-archive client.

**administrative command schedule**
A database record that describes the planned processing of an administrative command during a specific time period. See also central scheduler, client schedule, schedule.

**administrative privilege class**
See privilege class.
administrative session
A period of time during which an administrator user ID communicates with a server to perform administrative tasks. See also client node session, session.

administrator
A person responsible for administrative tasks such as access authorization and content management. Administrators can also grant levels of authority to users.

agent node
A client node that has been granted proxy authority to perform operations on behalf of another client node, which is the target node.

aggregate
An object, stored in one or more storage pools, consisting of a group of logical files that are packaged together. See also logical file, physical file.

aggregate data transfer rate
A performance statistic that indicates the average number of bytes that were transferred per second while processing a given operation.

application client
A program that is installed on a system to protect an application. The server provides backup services to an application client.

archive
To copy programs, data, or files to another storage media, usually for long-term storage or security. See also retrieve.

archive copy
A file or group of files that was archived to server storage.

archive copy group
A policy object containing attributes that control the generation, destination, and expiration of archived files. See also copy group.

archive-retention grace period
The number of days that the storage manager retains an archived file when the server is unable to rebind the file to an appropriate management class. See also bind.

association
The defined relationship between a client node and a client schedule. An association identifies the name of a schedule, the name of the policy domain to which the schedule belongs, and the name of a client node that performs scheduled operations.

audit
To check for logical inconsistencies between information that the server has and the actual condition of the system. The storage manager can audit information about items such as volumes, libraries, and licenses. For example, when a storage manager audits a volume, the server checks for inconsistencies between information about backed-up or archived files that are stored in the database and the actual data that are associated with each backup version or archive copy in server storage.

authentication rule
A specification that another user can use to either restore or retrieve files from storage.

authority
The right to access objects, resources, or functions. See also privilege class.

authorization rule
A specification that permits another user to either restore or retrieve a user's files from storage.

authorized user
A user who has administrative authority for the client on a workstation. This user changes passwords, performs open registrations, and deletes file spaces.

AutoFS
See automounted file system.

automatic detection
A feature that detects, reports, and updates the serial number of a drive or library in the database when the path from the local server is defined.

automatic migration
The process that is used to automatically move files from a local file system to storage, based on options and settings that are chosen by a root user on a workstation. See also demand migration, threshold migration.

automounted file system (AutoFS)
A file system that is managed by an
automounter daemon. The automounter daemon monitors a specified directory path, and automatically mounts the file system to access data.

**B**

**backup-archive client**
A program that runs on a workstation or file server and provides a means for users to back up, archive, restore, and retrieve files. See also [administrative client](#).

**backup copy group**
A policy object containing attributes that control the generation, destination, and expiration of backup versions of files. A backup copy group belongs to a management class. See also [copy group](#).

**backup retention grace period**
The number of days the storage manager retains a backup version after the server is unable to rebind the file to an appropriate management class.

**backup set**
A portable, consolidated group of active versions of backup files that are generated for a backup-archive client.

**backup set collection**
A group of backup sets that are created at the same time and which have the same backup set name, volume names, description, and device classes. The server identifies each backup set in the collection by its node name, backup set name, and file type.

**backup version**
A file or directory that a client node backed up to storage. More than one backup version can exist in storage, but only one backup version is the active version. See also [active version](#), [copy group](#), [inactive version](#).

**bind**
To associate a file with a management class name. See also [archive-retention grace period](#), [management class](#), [rebind](#).
cache
To place a duplicate copy of a file on random access media when the server migrates a file to another storage pool in the hierarchy.

cache file
A snapshot of a logical volume created by Logical Volume Snapshot Agent. Blocks are saved immediately before they are modified during the image backup and their logical extents are saved in the cache files.

central scheduler
A function that permits an administrator to schedule client operations and administrative commands. The operations can be scheduled to occur periodically or on a specific date. See also administrative command schedule, client schedule.

client
A software program or computer that requests services from a server. See also server.

client acceptor
A service that serves the Java applet for the web client to web browsers. On Windows systems, the client acceptor is installed and run as a service. On AIX®, UNIX, and Linux systems, the client acceptor is run as a daemon.

client acceptor daemon (CAD)
See client acceptor.

client domain
The set of drives, file systems, or volumes that the user selects to back up or archive data, using the backup-archive client.

client node
A file server or workstation on which the backup-archive client program has been installed, and which has been registered to the server.

client node session
A session in which a client node communicates with a server to perform backup, restore, archive, retrieve, migrate, or recall requests. See also administrative command session.

client option set
A group of options that are defined on the server and used on client nodes in conjunction with client options files.

client options file
An editable file that identifies the server and communication method, and provides the configuration for backup, archive, hierarchical storage management, and scheduling.

client-polling scheduling mode
A method of operation in which the client queries the server for work. See also server-prompted scheduling mode.

client schedule
A database record that describes the planned processing of a client operation during a specific time period. The client operation can be a backup, archive, restore, or retrieve operation, a client operating system command, or a macro. See also administrative command schedule, central scheduler schedule.

client/server
Pertaining to the model of interaction in distributed data processing in which a program on one computer sends a request to a program on another computer and awaits a response. The requesting program is called a client; the answering program is called a server.

client system-options file
A file, used on AIX, UNIX, or Linux system clients, containing a set of processing options that identify the servers to be contacted for services. This file also specifies communication methods and options for backup, archive, hierarchical storage management, and scheduling. See also client user-options file, options file.

client user-options file
A file that contains the set of processing options that the clients on the system use. The set can include options that determine the server that the client contacts, and options that affect backup operations, archive operations, hierarchical storage management operations, and scheduled operations. This file is also called the dsm.opt file. For AIX, UNIX, or Linux systems, see also client system-options file. See also client system-options file, options file.
closed registration
A registration process in which only an administrator can register workstations as client nodes with the server. See also open registration.

colocation
The process of keeping all data belonging to a single-client file space, a single client node, or a group of client nodes on a minimal number of sequential-access volumes within a storage pool. Colocation can reduce the number of volumes that must be accessed when a large amount of data must be restored.

colocation group
A user-defined group of client nodes whose data is stored on a minimal number of volumes through the process of colocation.

commit point
A point in time when data is considered to be consistent.

communication method
The method by which a client and server exchange information. See also Transmission Control Protocol/Internet Protocol.

communication protocol
A set of defined interfaces that permit computers to communicate with each other.

compression
A function that removes repetitive characters, spaces, strings of characters, or binary data from the data being processed and replaces characters with control characters. Compression reduces the amount of storage space that is required for data.

configuration manager
A server that distributes configuration information, such as policies and schedules, to managed servers according to their profiles. Configuration information can include policy and schedules. See also enterprise configuration, managed server, profile.

conversation
A connection between two programs over a session that allows them to communicate with each other while processing a transaction. See also session.

copy backup
A full backup in which the transaction log files are not deleted so that backup procedures that use incremental or differential backups are not disrupted.

copy group
A policy object containing attributes that control how backup versions or archive copies are generated, where backup versions or archive copies are initially located, and when backup versions or archive copies expire. A copy group belongs to a management class. See also archive copy group, backup copy group, backup version, management class.

copy storage pool
A named set of volumes that contain copies of files that reside in primary storage pools. Copy storage pools are used only to back up the data that is stored in primary storage pools. A copy storage pool cannot be a destination for a backup copy group, an archive copy group, or a management class (for space-managed files). See also destination, primary storage pool, server storage, storage pool, storage pool volume.

D

daemon
A program that runs unattended to perform continuous or periodic functions, such as network control.

damaged file
A physical file in which read errors have been detected.

database backup series
One full backup of the database, plus up to 32 incremental backups made since that full backup. Each full backup that is run starts a new database backup series. A number identifies each backup series. See also database snapshot, full backup.

database snapshot
A complete backup of the entire database to media that can be taken off-site. When a database snapshot is created, the current database backup series is not interrupted. A database snapshot cannot have incremental database backups associated with it. See also database backup series, full backup.
data center
In a virtualized environment, a container that holds hosts, clusters, networks, and data stores.

data deduplication
A method of reducing storage needs by eliminating redundant data. Only one instance of the data is retained on storage media. Other instances of the same data are replaced with a pointer to the retained instance.

data manager server
A server that collects metadata information for client inventory and manages transactions for the storage agent over the local area network. The data manager server informs the storage agent with applicable library attributes and the target volume identifier.

data mover
A device that moves data on behalf of the server. A network-attached storage (NAS) file server is a data mover.

data storage-management application-programming interface (DSMAPI)
A set of functions and semantics that can monitor events on files, and manage and maintain the data in a file. In an HSM environment, a DSMAPI uses events to notify data management applications about operations on files, stores arbitrary attribute information with a file, supports managed regions in a file, and uses DSMAPI access rights to control access to a file object.

data store
In a virtualized environment, the location where virtual machine data is stored.

deduplication
The process of creating representative records from a set of records that have been identified as representing the same entities.

default management class
A management class that is assigned to a policy set. This class is used to govern backed up or archived files when a file is not explicitly associated with a specific management class through the include-exclude list.

demand migration
The process that is used to respond to an out-of-space condition on a file system for which hierarchical storage management (HSM) is active. Files are migrated to server storage until space usage drops to the low threshold that was set for the file system. If the high threshold and low threshold are the same, one file is migrated. See also automatic migration, selective migration, threshold migration.

desktop client
The group of backup-archive clients that includes clients on Microsoft Windows, Apple, and Novell NetWare operating systems.

destination
A copy group or management class attribute that specifies the primary storage pool to which a client file will be backed up, archived, or migrated. See also copy storage pool.

device class
A named set of characteristics that are applied to a group of storage devices. Each device class has a unique name and represents a device type of disk, file, optical disk, or tape.

device configuration file
1. For a storage agent, a file that contains the name and password of the storage agent, and information about the server that is managing the SAN-attached libraries and drives that the storage agent uses.
2. For a server, a file that contains information about defined device classes, and, on some servers, defined libraries and drives. The information is a copy of the device configuration information in the database.

disaster recovery manager (DRM)
A function that assists in preparing and using a disaster recovery plan file for the server.

disaster recovery plan
A file that is created by the disaster recover manager (DRM) that contains information about how to recover computer systems if a disaster occurs and scripts that can be run to perform some recovery tasks. The file includes information about the software and
hardware that is used by the server, and the location of recovery media.

domain
A grouping of client nodes with one or more policy sets, which manage data or storage resources for the client nodes. See also policy domain.

DRM  See disaster recovery manager.

DSMAPI
See data storage-management application-programming interface.

dynamic serialization
Copy serialization in which a file or folder is backed up or archived on the first attempt regardless of whether it changes during a backup or archive. See also shared dynamic serialization, shared static serialization, static serialization.

E

EA  See extended attribute.

EB  See exabyte.

EFS  See Encrypted File System.

Encrypted File System (EFS)
A file system that uses file system-level encryption.

enterprise configuration
A method of setting up servers so that the administrator can distribute the configuration of one of the servers to the other servers, using server-to-server communication. See also configuration manager, managed server, profile, subscription.

enterprise logging
The process of sending events from a server to a designated event server. The event server routes the events to designated receivers, such as to a user exit. See also event.

error log
A data set or file that is used to record error information about a product or system.

estimated capacity
The available space, in megabytes, of a storage pool.

event
An occurrence of significance to a task or system. Events can include completion or failure of an operation, a user action, or the change in state of a process. See also enterprise logging, receiver.

event record
A database record that describes actual status and results for events.

event server
A server to which other servers can send events for logging. The event server routes the events to any receivers that are enabled for the sending server’s events.

exabyte (EB)
For processor, real and virtual storage capacities and channel volume, 2 to the power of 60 or 1 152 921 504 606 846 976 bytes. For disk storage capacity and communications volume, 1 000 000 000 000 000 000 000 000 bytes.

exclude
The process of identifying files in an include-exclude list. This process prevents the files from being backed up or migrated whenever a user or schedule enters an incremental or selective backup operation. A file can be excluded from backup, from space management, or from both backup and space management.

exclude–include list
See include-exclude list.

expiration
The process by which files, data sets, or objects are identified for deletion because their expiration date or retention period has passed.

expiring file
A migrated or premigrated file that has been marked for expiration and removal from storage. If a stub file or an original copy of a premigrated file is deleted from a local file system, or if the original copy of a premigrated file is updated, the corresponding migrated or premigrated file is marked for expiration the next time reconciliation is run.

extend
To increase the portion of available space that can be used to store database or recovery log information.

extended attribute (EA)
Names or value pairs that are associated with files or directories. There are three
classes of extended attributes: user attributes, system attributes, and trusted attributes.

**external library**
A collection of drives that is managed by the media-management system other than the storage management server.

**file access time**
On AIX, UNIX, or Linux systems, the time when the file was last accessed.

**file age**
For migration prioritization purposes, the number of days since a file was last accessed.

**file device type**
A device type that specifies the use of sequential access files on disk storage as volumes.

**file server**
A dedicated computer and its peripheral storage devices that are connected to a local area network that stores programs and files that are shared by users on the network.

**file space**
A logical space in server storage that contains a group of files that have been backed up or archived by a client node, from a single logical partition, file system, or virtual mount point. Client nodes can restore, retrieve, or delete their file spaces from server storage. In server storage, files belonging to a single file space are not necessarily stored together.

**file space ID (FSID)**
A unique numeric identifier that the server assigns to a file space when it is stored in server storage.

**file state**
The space management mode of a file that resides in a file system to which space management has been added. A file can be in one of three states: resident, premigrated, or migrated. See also migrated file, premigrated file, resident file.

**file system migrator (FSM)**
A kernel extension that intercepts all file system operations and provides any space management support that is required. If no space management support is required, the operation is passed to the operating system, which performs its normal functions. The file system migrator is mounted over a file system when space management is added to the file system.

**file system state**
The storage management mode of a file system that resides on a workstation on which the hierarchical storage management (HSM) client is installed. A file system can be in one of these states: native, active, inactive, or global inactive.

**frequency**
A copy group attribute that specifies the minimum interval, in days, between incremental backups.

**FSID** See file space ID

**FSM** See file system migrator

**full backup**
The process of backing up the entire server database. A full backup begins a new database backup series. See also database backup series, database snapshot, incremental backup

**fuzzy backup**
A backup version of a file that might not accurately reflect what is currently in the file because the file was backed up at the same time as it was being modified.

**fuzzy copy**
A backup version or archive copy of a file that might not accurately reflect the original contents of the file because it was backed up or archived while the file was being modified.

**G**

**GB** See gigabyte

**General Parallel File System (GPFS™)**
A high-performance shared-disk file system that can provide data access from nodes in a clustered system environment. See also information lifecycle management

**gigabyte (GB)**
For processor storage, real and virtual storage, and channel volume, 10 to the
power of nine or 1,073,741,824 bytes. For disk storage capacity and communications volume, 1,000,000,000 bytes.

global inactive state
The state of all file systems to which space management has been added when space management is globally deactivated for a client node.

Globally Unique Identifier (GUID)
An algorithmically determined number that uniquely identifies an entity within a system. See also Universally Unique Identifier.

GPFS
See General Parallel File System.

GPFS node set
A mounted, defined group of GPFS file systems.

group backup
The backup of a group containing a list of files from one or more file space origins.

GUID
See Globally Unique Identifier.

H

hierarchical storage management (HSM)
A function that automatically distributes and manages data on disk, tape, or both by regarding devices of these types and potentially others as levels in a storage hierarchy that range from fast, expensive devices to slower, cheaper, and possibly removable devices. The objectives are to minimize access time to data and maximize available media capacity. See also hierarchical storage management client, recall, storage hierarchy.

hierarchical storage management client (HSM client)
A client program that works with the server to provide hierarchical storage management (HSM) for a system. See also hierarchical storage management management class.

HSM
See hierarchical storage management.

HSM client
See hierarchical storage management client.
I

ILM See information lifecycle management

image A file system or raw logical volume that is backed up as a single object.

image backup A backup of a full file system or raw logical volume as a single object.

inactive file system A file system for which space management has been deactivated. See also active file system

inactive version A backup version of a file that is either not the most recent backup version, or that is a backup version of a file that no longer exists on the client system. Inactive backup versions are eligible for expiration processing according to the management class assigned to the file. See also active version backup version

include-exclude file A file containing statements to determine the files to back up and the associated management classes to use for backup or archive. See also include-exclude list

include-exclude list A list of options that include or exclude selected files for backup. An exclude option identifies files that should not be backed up. An include option identifies files that are exempt from the exclusion rules or assigns a management class to a file or a group of files for backup or archive services. See also include-exclude file

incremental backup The process of backing up files or directories, or copying pages in the database, that are new or changed since the last full or incremental backup. See also selective backup

individual mailbox restore See mailbox restore

information lifecycle management (ILM) A policy-based file-management system for storage pools and file sets. See also General Parallel File System

inode The internal structure that describes the individual files on AIX, UNIX, or Linux systems. An inode contains the node, type, owner, and location of a file.

inode number A number specifying a particular inode file in the file system.

IP address A unique address for a device or logical unit on a network that uses the Internet Protocol standard.

J

job file A generated file that contains configuration information for a migration job. The file is XML format and can be created and edited in the hierarchical storage management (HSM) client for Windows client graphical user interface. See also migration job

journal-based backup A method for backing up Windows clients and AIX clients that exploits the change notification mechanism in a file to improve incremental backup performance by reducing the need to fully scan the file system.

journal daemon On AIX, UNIX, or Linux systems, a program that tracks change activity for files residing in file systems.

journal service In Microsoft Windows, a program that tracks change activity for files residing in file systems.

K

KB See kilobyte

kilobyte (KB) For processor storage, real and virtual storage, and channel volume, 2 to the power of 10 or 1,024 bytes. For disk storage capacity and communications volume, 1,000 bytes.
LAN-See local area network.

LAN-free data movement
The movement of client data between a client system and a storage device on a storage area network (SAN), bypassing the local area network.

LAN-free data transfer
See LAN-free data movement.

leader data
Bytes of data, from the beginning of a migrated file, that are stored in the file’s corresponding stub file on the local file system. The amount of leader data that is stored in a stub file depends on the stub size that is specified.

library
1. A repository for demountable recorded media, such as magnetic disks and magnetic tapes.
2. A collection of one or more drives, and possibly robotic devices (depending on the library type), which can be used to access storage volumes.

library client
A server that uses server-to-server communication to access a library that is managed by another storage management server. See also library manager.

library manager
A server that controls device operations when multiple storage management servers share a storage device. See also library client.

local
1. Pertaining to a device, file, or system that is accessed directly from a user system, without the use of a communication line. See also remote.
2. For hierarchical storage management products, pertaining to the destination of migrated files that are being moved. See also remote.

local area network (LAN)
A network that connects several devices in a limited area (such as a single building or campus) and that can be connected to a larger network.

local shadow volume
Data that is stored on shadow volumes localized to a disk storage subsystem.

LOFS See loopback virtual file system.

logical file
A file that is stored in one or more server storage pools, either by itself or as part of an aggregate. See also aggregate, physical file, physical occupancy.

logical occupancy
The space that is used by logical files in a storage pool. This space does not include the unused space created when logical files are deleted from aggregate files, so it might be less than the physical occupancy. See also physical occupancy.

logical unit number (LUN)
In the Small Computer System Interface (SCSI) standard, a unique identifier used to differentiate devices, each of which is a logical unit (LU).

logical volume
A portion of a physical volume that contains a file system.

logical volume backup
A back up of a file system or logical volume as a single object.

Logical Volume Snapshot Agent (LVSA)
Software that can act as the snapshot provider for creating a snapshot of a logical volume during an online image backup.

loopback virtual file system (LOFS)
A file system that is created by mounting a directory over another local directory, also known as mount-over-mount. A LOFS can also be generated using an automounter.

LUN See logical unit number.

LVSA See Logical Volume Snapshot Agent.
M

macro file
A file that contains one or more storage manager administrative commands, which can be run only from an administrative client using the MACRO command. See also Tivoli Storage Manager command script.

mailbox restore
A function that restores Microsoft Exchange Server data (from IBM Data Protection for Microsoft Exchange backups) at the mailbox level or mailbox-item level.

managed object
A definition in the database of a managed server that was distributed to the managed server by a configuration manager. When a managed server subscribes to a profile, all objects that are associated with that profile become managed objects in the database of the managed server.

managed server
A server that receives configuration information from a configuration manager using a subscription to one or more profiles. Configuration information can include definitions of objects such as policy and schedules. See also configuration manager, enterprise configuration, profile, subscription.

management class
A policy object that users can bind to each file to specify how the server manages the file. The management class can contain a backup copy group, an archive copy group, and space management attributes. See also bind, copy group, hierarchical storage management client, policy set, rebinding.

maximum transmission unit (MTU)
The largest possible unit of data that can be sent on a given physical medium in a single frame. For example, the maximum transmission unit for Ethernet is 1500 bytes.

MB
See megabyte

media server
In a z/OS® environment, a program that provides access to z/OS disk and tape storage for Tivoli Storage Manager servers that run on operating systems other than z/OS.

megabyte (MB)
For processor storage, real and virtual storage, and channel volume, 2 to the 20th power or 1,048,576 bytes. For disk storage capacity and communications volume, 1,000,000 bytes.

metadata
Data that describes the characteristics of data; descriptive data.

migrate
To move data to another location, or an application to another computer system.

migrated file
A file that has been copied from a local file system to storage. For HSM clients on UNIX or Linux systems, the file is replaced with a stub file on the local file system. On Windows systems, creation of the stub file is optional. See also file state: premigrated file, resident file, stub file.

migration
The process of moving data from one computer system to another, or an application to another computer system.

migration job
A specification of files to migrate, and actions to perform on the original files after migration. See also job file, threshold migration.

migration threshold
High and low capacities for storage pools or file systems, expressed as percentages, at which migration is set to start and stop.

mirroring
The process of writing the same data to multiple disks at the same time. The mirroring of data protects it against data loss within the database or within the recovery log.

mode
A copy group attribute that specifies whether to back up a file that has not been modified since the last time the file was backed up. See also absolute mode, modified mode.

modified mode
In storage management, a backup copy-group mode that specifies that a file
is considered for incremental backup only if it has changed since the last backup. A file is considered a changed file if the date, size, owner, or permissions of the file have changed. See also absolute mode.

**mount limit**
The maximum number of volumes that can be simultaneously accessed from the same device class. The mount limit determines the maximum number of mount points. See also mount point.

**mount point**
A logical drive through which volumes are accessed in a sequential access device class. For removable media device types, such as tape, a mount point is a logical drive associated with a physical drive. For the file device type, a mount point is a logical drive associated with an I/O stream. See also mount limit.

**mount retention period**
The maximum number of minutes that the server retains a mounted sequential-access media volume that is not being used before it dismounts the sequential-access media volume.

**mount wait period**
The maximum number of minutes that the server waits for a sequential-access volume mount request to be satisfied before canceling the request.

**MTU**
See maximum transmission unit.

**Nagle algorithm**
An algorithm that reduces congestion of TCP/IP networks by combining smaller packets and sending them together.

**named pipe**
A type of interprocess communication that permits message data streams to pass between peer processes, such as between a client and a server.

**NAS file server**
See network-attached storage file server.

**NAS file server node**
See NAS node.

**NAS node**
A client node that is a network-attached storage (NAS) file server. Data for the NAS node is transferred by a NAS file server that is controlled by the network data management protocol (NDMP). A NAS node is also called a NAS file server node.

**native file system**
A file system that is locally added to the file server and is not added for space management. The hierarchical storage manager (HSM) client does not provide space management services to the file system.

**native format**
A format of data that is written to a storage pool directly by the server. See non-native data format.

**NDMP**
See Network Data Management Protocol.

**NetBIOS (Network Basic Input/Output System)**
A standard interface to networks and personal computers that is used on local area networks to provide message, print-server, and file-server functions. Application programs that use NetBIOS do not have to handle the details of LAN data link control (DLC) protocols.

**network-attached storage file server (NAS file server)**
A dedicated storage device with an operating system that is optimized for file-serving functions. A NAS file server can have the characteristics of both a node and a data mover.

**Network Basic Input/Output System**
See NetBIOS.

**Network Data Management Protocol (NDMP)**
A protocol that allows a network storage-management application to control the backup and recovery of an NDMP-compliant file server, without installing vendor-acquired software on that file server.

**network data-transfer rate**
A rate that is calculated by dividing the total number of bytes that are transferred by the data transfer time. For example, this rate can be the time that is spent transferring data over a network.

**node**
A file server or workstation on which the
backup-archive client program has been installed, and which has been registered to the server.

**node name**
A unique name that is used to identify a workstation, file server, or PC to the server.

**node privilege class**
A privilege class that gives an administrator the authority to remotely access backup-archive clients for a specific client node or for all clients in a policy domain. See also [privilege class](#).

**non-native data format**
A format of data that is written to a storage pool that differs from the format that the server uses for operations. See also [native format](#).

**offline volume backup**
A backup in which the volume is locked so that no other system applications can access it during the backup operation.

**online volume backup**
A backup in which the volume is available to other system applications during the backup operation.

**open registration**
A registration process in which users can register their workstations as client nodes with the server. See also [closed registration](#).

**operator privilege class**
A privilege class that gives an administrator the authority to disable or halt the server, enable the server, cancel server processes, and manage removable media. See also [privilege class](#).

**options file**
A file that contains processing options. See also [client system-options file](#), [client user-options file](#).

**originating file system**
The file system from which a file was migrated. When a file is recalled, it is returned to its originating file system.

**orphaned stub file**
A file for which no migrated file can be found on the server that the client node is contacting for space management services. For example, a stub file can be orphaned when the client system-options file is modified to contact a server that is different than the one to which the file was migrated.

**packet**
In data communication, a sequence of binary digits, including data and control signals, that are transmitted and switched as a composite whole.

**page**
A defined unit of space on a storage medium or within a database volume.

**partial-file recall mode**
A recall mode that causes the hierarchical storage management (HSM) function to read just a portion of a migrated file from storage, as requested by the application accessing the file.

**password generation**
A process that creates and stores a new password in an encrypted password file when the old password expires. Automatic generation of a password prevents password prompting.

**path**
An object that defines a one-to-one relationship between a source and a destination. Using the path, the source accesses the destination. Data can flow from the source to the destination, and back. An example of a source is a data mover (such as a network-attached storage [NAS] file server), and an example of a destination is a tape drive.

**pattern-matching character**
See [wildcard character](#).

**physical file**
A file that is stored in one or more storage pools, consisting of either a single logical file, or a group of logical files that are packaged together as an aggregate. See also [aggregate](#), [logical file](#), [physical occupancy](#).

**physical occupancy**
The amount of space that is used by physical files in a storage pool. This space includes the unused space that is created when logical files are deleted from aggregates. See also [logical file](#), [logical occupancy](#), [physical file](#).
plug-in
A separately installable software module that adds function to an existing program, application, or interface.

policy domain
A grouping of policy users with one or more policy sets, which manage data or storage resources for the users. The users are client nodes that are associated with the policy domain. See also active policy set, domain.

policy privilege class
A privilege class that gives an administrator the authority to manage policy objects, register client nodes, and schedule client operations for client nodes. Authority can be restricted to certain policy domains. See also privilege class.

policy set
A group of rules in a policy domain. The rules specify how data or storage resources are automatically managed for client nodes in the policy domain. Rules can be contained in management classes. See also active policy set, management class.

premigrated file
A file that has been copied to server storage, but has not been replaced with a stub file on the local file system. An identical copy of the file resides both on the local file system and in server storage. Premigrated files occur on UNIX and Linux file systems to which space management has been added. See also file state, migrated file, resident file.

premigrated files database
A database that contains information about each file that has been premigrated to server storage.

premigration
The process of copying files that are eligible for migration to server storage, but leaving the original file intact on the local file system.

premigration percentage
A space management setting that controls whether the next eligible candidates in a file system are premigrated following threshold or demand migration.

primary storage pool
A named set of volumes that the server uses to store backup versions of files, archive copies of files, and files migrated from client nodes. See also copy storage pool, server storage, storage pool, storage pool volume.

privilege class
A level of authority that is granted to an administrator. The privilege class determines which administrative tasks the administrator can perform. See also authority, node privilege class, operator privilege class, policy privilege class, storage privilege class, system privilege class.

profile
A named group of configuration information that can be distributed from a configuration manager when a managed server subscribes. Configuration information can include registered administrator IDs, policies, client schedules, client option sets, administrative schedules, storage manager command scripts, server definitions, and server group definitions. See also configuration manager, enterprise configuration, managed server.

profile association
On a configuration manager, the defined relationship between a profile and an object such as a policy domain. Profile associations define the configuration information that is distributed to a managed server when it subscribes to the profile.

Q

quota
1. For HSM on AIX, UNIX, or Linux systems, the limit (in megabytes) on the amount of data that can be migrated and premigrated from a file system to server storage.
2. For HSM on Windows systems, a user-defined limit to the space that is occupied by recalled files.
randomization
The process of distributing schedule start times for different clients within a specified percentage of the schedule's startup window.

raw logical volume
A portion of a physical volume that is comprised of unallocated blocks and has no journaled file system (JFS) definition. A logical volume is read/write accessible only through low-level I/O functions.

rebind
To associate all backed-up versions of a file with a new management class name. For example, a file that has an active backup version is rebound when a later version of the file is backed up with a different management class association. See also bind, management class.

recall
To copy a migrated file from server storage back to its originating file system using the hierarchical storage management client. See also selective recall.

receiver
A server repository that contains a log of server and client messages as events. For example, a receiver can be a file exit, a user exit, or the server console and activity log. See also event.

reclamation
The process of consolidating the remaining data from many sequential-access volumes onto fewer, new sequential-access volumes.

reclamation threshold
The percentage of space that a sequential-access media volume must have before the server can reclaim the volume. Space becomes reclaimable when files are expired or are deleted.

reconciliation
The process of ensuring consistency between the original data repository and the larger system where the data is stored for backup. Examples of larger systems where the data is stored for backup are storage servers or other storage systems.

During the reconciliation process, data that is identified as no longer needed is removed.

recovery log
A log of updates that are about to be written to the database. The log can be used to recover from system and media failures. The recovery log consists of the active log (including the log mirror) and archive logs.

register
To define a client node or administrator ID that can access the server.

registry
A repository that contains access and configuration information for users, systems, and software.

remote
For hierarchical storage management products, pertaining to the origin of migrated files that are being moved. See also local.

resident file
On a Windows system, a complete file on a local file system that might also be a migrated file because a migrated copy can exist in server storage. On a UNIX or Linux system, a complete file on a local file system that has not been migrated or premigrated, or that has been recalled from server storage and modified. See also file state.

restore
To copy information from its backup location to the active storage location for use. For example, to copy information from server storage to a client workstation.

retention
The amount of time, in days, that inactive backed-up or archived files are kept in the storage pool before they are deleted. Copy group attributes and default retention grace periods for the domain define retention.

retrieve
To copy archived information from the storage pool to the workstation for use. The retrieve operation does not affect the archive version in the storage pool. See also archive.
root user
A system user who operates without restrictions. A root user has the special rights and privileges needed to perform administrative tasks.

SAN
See storage area network.

schedule
A database record that describes client operations or administrative commands to be processed. See also administrative command schedule, client schedule.

scheduling mode
The type of scheduling operation for the server and client node that supports two scheduling modes: client-polling and server-prompted.

scratch volume
A labeled volume that is either blank or contains no valid data, that is not defined, and that is available for use. See also volume.

script
A series of commands, combined in a file, that carry out a particular function when the file is run. Scripts are interpreted as they are run. See also Tivoli Storage Manager command script.

Secure Sockets Layer (SSL)
A security protocol that provides communication privacy. With SSL, client/server applications can communicate in a way that is designed to prevent eavesdropping, tampering, and message forgery.

selective backup
The process of backing up certain files or directories from a client domain. The files that are backed up are those that are not excluded in the include-exclude list. The files must meet the requirement for serialization in the backup copy group of the management class that is assigned to each file. See also incremental backup.

selective migration
The process of copying user-selected files from a local file system to server storage and replacing the files with stub files on the local file system. See also demand migration, threshold migration.

selective recall
The process of copying user-selected files from server storage to a local file system. See also recall, transparent recall.

serialization
The process of handling files that are modified during backup or archive processing. See also shared dynamic serialization, shared static serialization, static serialization.

server
A software program or a computer that provides services to other software programs or other computers. See also client.

server options file
A file that contains settings that control various server operations. These settings affect such things as communications, devices, and performance.

server-prompted scheduling mode
A client/server communication technique where the server contacts the client node when tasks must be done. See also client-polling scheduling mode.

server storage
The primary, copy, and active-data storage pools that are used by the server to store user files such as backup versions, archive copies, and files migrated from hierarchical storage management client nodes (space-managed files). See also active-data pool, copy storage pool, primary storage pool, storage pool, volume.

session
A logical or virtual connection between two stations, software programs, or devices on a network that allows the two elements to communicate and exchange data for the duration of the session. See also administrative session.

session resource usage
The amount of wait time, processor time, and space that is used or retrieved during a client session.

shadow copy
A snapshot of a volume. The snapshot can be taken while applications on the system continue to write data to the volumes.
shadow volume
The data stored from a snapshot of a volume. The snapshot can be taken while applications on the system continue to write data to the volumes.

shared dynamic serialization
A value for serialization that specifies that a file must not be backed up or archived if it is being modified during the operation. The backup-archive client retries the backup or archive operation a number of times; if the file is being modified during each attempt, the backup-archive client will back up or archive the file on its last try. See also dynamic serialization, serialization, shared static serialization, static serialization.

shared library
A library device that is used by multiple storage manager servers. See also library.

shared static serialization
A copy-group serialization value that specifies that a file must not be modified during a backup or archive operation. The client attempts to retry the operation a number of times. If the file is in use during each attempt, the file is not backed up or archived. See also dynamic serialization, serialization, shared dynamic serialization, static serialization.

snapshot
An image backup type that consists of a point-in-time view of a volume.

space-managed file
A file that is migrated from a client node by the hierarchical storage management (HSM) client. The HSM client recalls the file to the client node on demand.

space management
See hierarchical storage management.

space monitor daemon
A daemon that checks space usage on all file systems for which space management is active, and automatically starts threshold migration when space usage on a file system equals or exceeds its high threshold.

sparse file
A file that is created with a length greater than the data it contains, leaving empty spaces for the future addition of data.

special file
On AIX, UNIX, or Linux systems, a file that defines devices for the system, or temporary files that are created by processes. There are three basic types of special files: first-in, first-out (FIFO); block; and character.

SSL
See Secure Sockets Layer.

stabilized file space
A file space that exists on the server but not on the client.

stanza
A group of lines in a file that together have a common function or define a part of the system. Stanzas are usually separated by blank lines or colons, and each stanza has a name.

startup window
A time period during which a schedule must be initiated.

static serialization
A copy-group serialization value that specifies that a file must not be modified during a backup or archive operation. If the file is in use during the first attempt, the backup-archive client cannot back up or archive the file. See also dynamic serialization, serialization, shared dynamic serialization, shared static serialization.

storage agent
A program that enables the backup and restoration of client data directly to and from storage attached to a storage area network (SAN).

storage area network (SAN)
A dedicated storage network tailored to a specific environment, combining servers, systems, storage products, networking products, software, and services.

storage hierarchy
A logical order of primary storage pools, as defined by an administrator. The order is typically based on the speed and capacity of the devices that the storage pools use. The storage hierarchy is defined by identifying the next storage pool in a storage pool definition. See also storage pool.

storage pool
A named set of storage volumes that is the destination that is used to store client
data. See also active-data pool, copy storage pool, primary storage pool, storage hierarchy.

storage pool volume
A volume that has been assigned to a storage pool. See also active-data pool, copy storage pool, primary storage pool, server storage, volume.

storage privilege class
A privilege class that gives an administrator the authority to control how storage resources for the server are allocated and used, such as monitoring the database, the recovery log, and server storage. See also privilege class.

stub
A shortcut on the Windows file system that is generated by the hierarchical storage management (HSM) client for a migrated file that allows transparent user access. A stub is the sparse file representation of a migrated file, with a reparse point attached.

stub file
A file that replaces the original file on a local file system when the file is migrated to storage. A stub file contains the information that is necessary to recall a migrated file from server storage. It also contains additional information that can be used to eliminate the need to recall a migrated file. See also migrated file, resident file.

stub file size
The size of a file that replaces the original file on a local file system when the file is migrated to server storage. The size that is specified for stub files determines how much leader data can be stored in the stub file. The default for stub file size is the block size defined for a file system minus 1 byte.

subscription
In a storage environment, the process of identifying the subscribers to which the profiles are distributed. See also enterprise configuration, managed server.

system privilege class
A privilege class that gives an administrator the authority to issue all server commands. See also privilege class.
taped library
A set of equipment and facilities that support an installation's tape environment. The tape library can include tape storage racks, mechanisms for automatic tape mounting, a set of tape drives, and a set of related tape volumes mounted on those drives.

tape volume prefix
The high-level-qualifier of the file name or the data set name in the standard tape label.

target node
A client node for which other client nodes (called agent nodes) have been granted proxy authority. The proxy authority allows the agent nodes to perform operations such as backup and restore on behalf of the target node, which owns the data.

TCA
See trusted communications agent.

TCP/IP

threshold migration
The process of moving files from a local file system to server storage based on the high and low thresholds that are defined for the file system. See also automatic migration, demand migration, migration job, selective migration.

throughput
In storage management, the total bytes in the workload, excluding overhead, that are backed up or restored, divided by elapsed time.

timeout
A time interval that is allotted for an event to occur or complete before operation is interrupted.

Tivoli Storage Manager command script
A sequence of Tivoli Storage Manager administrative commands that are stored in the database of the Tivoli Storage Manager server. The script can run from any interface to the server. The script can include substitution for command parameters and conditional logic. See also macro file, script.

tombstone object
A small subset of attributes of a deleted object. The tombstone object is retained for a specified period, and at the end of the specified period, the tombstone object is permanently deleted.

Transmission Control Protocol/Internet Protocol (TCP/IP)
An industry-standard, nonproprietary set of communication protocols that provides reliable end-to-end connections between applications over interconnected networks of different types. See also communication method.

transparent recall
The process that is used to automatically recall a migrated file to a workstation or file server when the file is accessed. See also selective recall.

trusted communications agent (TCA)
A program that handles the sign-on password protocol when clients use password generation.

U

UCS-2
A 2-byte (16-bit) encoding scheme based on ISO/IEC specification 10646-1. UCS-2 defines three levels of implementation: Level 1-No combining of encoded elements allowed; Level 2-Combining of encoded elements is allowed only for Thai, Indic, Hebrew, and Arabic; Level 3-Any combination of encoded elements are allowed.

UNC
See Universal Naming Convention.

Unicode
A character encoding standard that supports the interchange, processing, and display of text that is written in the common languages around the world, plus many classical and historical texts.

Unicode-enabled file space
Unicode file space names provide support for multilingual workstations without regard for the current locale.

Universally Unique Identifier (UUID)
The 128-bit numeric identifier that is used to ensure that two components do not have the same identifier. See also Globally Unique Identifier.
Universal Naming Convention (UNC)  
The server name and network name combined. These names together identify the resource on the domain.

UTF-8  
Unicode Transformation Format, 8-bit encoding form, which is designed for ease of use with existing ASCII-based systems. The CCSID value for data in UTF-8 format is 1208. See also UCS-2.

UUID  
See Universally Unique Identifier.

validate  
To check a policy set for conditions that can cause problems if that policy set becomes the active policy set. For example, the validation process checks whether the policy set contains a default management class.

version  
A backup copy of a file stored in server storage. The most recent backup copy of a file is the active version. Earlier copies of the same file are inactive versions. The number of versions retained by the server is determined by the copy group attributes in the management class.

virtual file space  
A representation of a directory on a network-attached storage (NAS) file system as a path to that directory.

virtual mount point  
A directory branch of a file system that is defined as a virtual file system. The virtual file system is backed up to its own file space on the server. The server processes the virtual mount point as a separate file system, but the client operating system does not.

virtual volume  
An archive file on a target server that represents a sequential media volume to a source server.

volume  
A discrete unit of storage on disk, tape or other data recording medium that supports some form of identifier and parameter list, such as a volume label or input/output control. See also scratch volume, server storage, storage pool, storage pool volume.

volume history file  
A file that contains information about volumes that have been used by the server for database backups and for export of administrator, node, policy, or server data. The file also has information about sequential-access storage pool volumes that have been added, reused, or deleted. The information is a copy of volume information that is recorded in the server database.

Volume Shadow Copy Service (VSS)  
A set of Microsoft application-programming interfaces (APIs) that are used to create shadow copy backups of volumes, exact copies of files, including all open files, and so on.

VSS  
See Volume Shadow Copy Service.

VSS Backup  
A backup operation that uses Microsoft Volume Shadow Copy Service (VSS) technology. The backup operation produces an online snapshot (point-in-time consistent copy) of Microsoft Exchange data. This copy can be stored on local shadow volumes or on Tivoli Storage Manager server storage.

VSS Fast Restore  
An operation that restores data from a local snapshot. The snapshot is the VSS backup that resides on a local shadow volume. The restore operation retrieves the data by using a file-level copy method.

VSS Instant Restore  
An operation that restores data from a local snapshot. The snapshot is the VSS backup that resides on a local shadow volume. The restore operation retrieves the data by using a hardware assisted restore method (for example, a FlashCopy operation).

VSS offloaded backup  
A backup operation that uses a Microsoft Volume Shadow Copy Service (VSS) hardware provider (installed on an alternate system) to move IBM Data Protection for Microsoft Exchange data to the Tivoli Storage Manager server. This type of backup operation shifts the backup load from the production system to another system.
VSS Restore
A function that uses a Microsoft Volume Shadow Copy Service (VSS) software provider to restore VSS Backups (IBM Data Protection for Microsoft Exchange database files and log files) that reside on Tivoli Storage Manager server storage to their original location.
wildcard character
A special character such as an asterisk (*) or a question mark (?) that can be used to represent one or more characters. Any character or set of characters can replace the wildcard character.

workload partition (WPAR)
A partition within a single operating system instance.

workstation
A terminal or personal computer at which a user can run applications and that is usually connected to a mainframe or a network.

worldwide name (WWN)
A 64-bit, unsigned name identifier that is unique.

WPART See [workload partition](#)
WNW See [worldwide name](#)