

IBM Tivoli Storage Manager for Mail
Version 7.1

*Data Protection for Microsoft Exchange
Server
Messages*

IBM

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Server
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Note:

Before using this information and the product it supports, read the information in "Notices" on page 43.

First edition (December 2013)

This edition applies to version 7, release 1, modification 0 of the IBM Tivoli Storage Manager for Mail, Data Protection for Microsoft Exchange Server (product number 5608-E06) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this publication

IBM Tivoli® Storage Manager for Mail, Data Protection for Microsoft Exchange Server is an enterprise-wide storage management application for the network. It backs up and restores Microsoft Exchange Server databases to Tivoli Storage Manager storage or local shadow volumes.

This publication contains explanations and suggested actions for messages that are issued by IBM Tivoli Storage Manager for Mail, Data Protection for Microsoft Exchange Server.

Who should read this publication

The target audience for this publication is system administrators who use IBM® Tivoli Storage Manager for Mail, Data Protection for Microsoft Exchange Server. In this publication, it is assumed that you have a working knowledge of Tivoli Storage Manager for Mail, Data Protection for Microsoft Exchange Server.

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>.

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%20Documentation%20Central).

Chapter 1. Introduction to Data Protection for Microsoft Exchange Server messages

Messages with prefix ACN are issued by IBM Tivoli Storage Manager for Mail, Data Protection for Microsoft Exchange Server. Data Protection for Microsoft Exchange Server interacts with the IBM Tivoli Storage Manager backup-archive clients. When Data Protection for Microsoft Exchange Server runs, you might see messages from backup-archive clients. Backup-archive clients messages have prefix ANS or prefix FMV, depending on which licenses you installed.

For information about ANS messages, see the *IBM Tivoli Storage Manager Client Messages and Application Programming Interface Return Codes* publication.

For information about FMV messages, see the *IBM Tivoli Storage FlashCopy Manager Messages* publication.

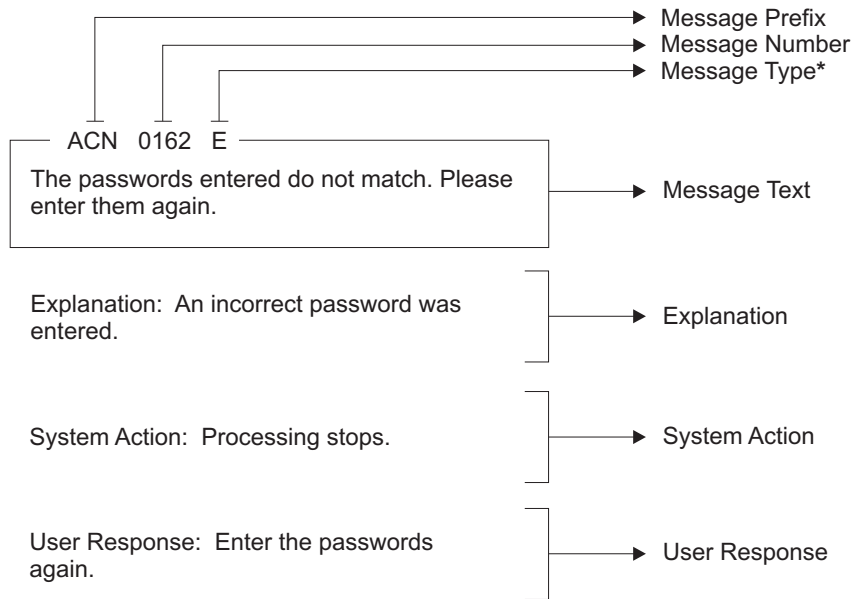
Data Protection for Microsoft Exchange Server messages format

IBM Tivoli Storage Manager for Mail, Data Protection for Microsoft Exchange Server 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 accessible only in documentation.

The image presents a typical Data Protection for Microsoft Exchange Server message.

The callouts on the right of the image identify each element of the message.



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

The severity codes give an indication of the severity of the issue that generated the message. The severity codes and their meanings are as follows:

Code	Severity	Meaning
S	Severe	The product or a product function cannot continue. User response is required.
E	Error	An error is encountered during processing. Processing might stop. User response might be required.
W	Warning	Processing continues, but problems might occur later as a result of the warning.
I	Information	Processing continues. User response is not necessary.

Message variables in the message text are in italics.

Chapter 2. Data Protection for Microsoft Exchange Server messages

IBM Tivoli Storage Manager for Mail, Data Protection for Microsoft Exchange Server V7.1 messages are listed in ascending numerical order. The complete message is documented, including message ID, message text, explanation, system action, and user response.

ACN0003S An internal processing error has occurred.

Explanation: An internal processing error has occurred.

System action: Processing ends.

User response: Retry the operation. If this error persists, contact your service representative.

ACN0004E An unknown error has been detected.

Explanation: An internal processing error has occurred that prevents the generation of a message for a return code.

System action: Processing continues.

User response: Retry the operation. If this error persists, contact your service representative.

ACN0005E Out of memory. Stop other processes and try the operation again.

Explanation: The machine has run out of memory.

System action: Processing continues.

User response: Close unnecessary processes and try the operation again.

ACN0053E License file (*licensefile*) could not be opened.

Explanation: An attempt to read from the license file failed.

System action: Processing ends.

User response: Install the product again. This ensures that the correct license file is installed.

ACN0054E Read failure on license file (*licensefile*).

Explanation: An attempt was made to read from the license file. This attempt failed.

System action: Processing ends.

User response: Reinstall the product. This will ensure that the correct license file is installed.

ACN0055E Write failure on license file (*licensefile*).

Explanation: An attempt to write to the license file failed.

System action: Processing ends.

User response: Make sure enough space exists on the workstation to write to the license file. If enough space exists, run the command again.

ACN0056E Data in the license file (*licensefile*) is not in a valid format.

Explanation: An attempt to read information from the license file failed.

System action: Processing ends.

User response: Install the product again.

ACN0057E The checksum in the license file (*licensefile*) does not match the license string text.

Explanation: An attempt was made to read information from the license file. The checksum was not valid so it appears that the license file is not at the correct level.

System action: Processing ends.

User response: Reinstall the product.

ACN0058E The 'Try and Buy' license has expired.

Explanation: This 'Try and Buy' license that was detected has expired.

System action: Processing ends.

User response: This product is no longer valid for use. A valid license must be obtained before running the product.

ACN0100E Incomplete command:

Explanation: This message displays the incomplete command that was entered.

System action: Processing ends.

User response: Re-enter the complete command.

ACN0101E Invalid argument:

Explanation: This message displays the command that was entered, up to and including the invalid command or option argument that was detected.

System action: Processing ends.

User response: Re-enter the command specifying a valid argument for the command or option.

ACN0102E Invalid command:

Explanation: This message displays the invalid command that was entered.

System action: Processing ends.

User response: Re-enter a valid command.

ACN0103E Invalid option for the specified command:

Explanation: This message displays the command that was entered, up to and including the option that was detected as invalid for the command.

System action: Processing ends.

User response: Re-enter the command specifying valid command options.

ACN0104E Invalid option:

Explanation: This message displays the command that was entered, up to and including the invalid option that was detected.

System action: Processing ends.

User response: Re-enter the command specifying valid command options.

ACN0105E Missing argument:

Explanation: This message displays the command that was entered, up to and including the command or option whose required argument is missing.

System action: Processing ends.

User response: Re-enter the command specifying a valid argument for the command or option.

ACN0132W Tracing could not be started. Processing will continue.

Explanation: A problem prevented tracing from beginning.

System action: Processing will continue with the command entered.

User response: Refer to the other messages that display with this message to determine the problem.

ACN0133W Could not locate installation directory. Attempting to continue...

Explanation: An attempt was made to read the registry to determine where the Tivoli Data Protection application client was installed. This attempt failed.

System action: Processing will continue with the command entered.

User response: There should be other messages along with this one. Refer to the other messages to determine the problem. If the problem can not be determined, it may be necessary to reinstall the application client code. This will ensure that the registry entries are set up correctly.

ACN0134W Could not locate log directory. Processing will continue...

Explanation: An attempt was made to read the registry to determine where the Tivoli Data Protection application client log is located. This attempt failed.

System action: Processing will continue with the command entered.

User response: There should be other messages along with this one. Refer to the other messages to determine the problem. If the problem can not be determined, it may be necessary to reinstall the application client code. This will ensure that the registry entries are set up correctly.

ACN0150I Operation canceled by user.

Explanation: The user has requested that the Data Protection for Microsoft Exchange Server application client end by entering ctrl-C.

System action: Processing ends.

User response: None

ACN0151E Errors occurred while processing the request.

Explanation: Attempting to process the request entered, an error occurred.

System action: Processing ends.

User response: Attempt to determine the source of the errors from viewing the log file. Correct the problems and try running the command again.

ACN0152I Performance stats: *seconds* seconds spent in *apicall* API calls

Explanation: The indicated number of seconds were spent making API calls for the indicated system.

System action: Processing continues.

User response: None

ACN0153I Performance stats: *seconds* seconds spent in *function*

Explanation: The indicated number of seconds were spent the named function.

System action: Processing continues.

User response: None

ACN0154E The Data Protection for Microsoft Exchange Server application client cannot work with the version of the Tivoli Storage Manager API you have installed. Please install version *version.release.level* or greater.

Explanation: The version of the Tivoli Storage Manager API currently installed on the system is older than the version used to build the Data Protection for Microsoft Exchange Server application client.

System action: Processing ends.

User response: Install a version of the Tivoli Storage Manager API at or later than the indicated level. A copy is distributed with the Data Protection for Microsoft Exchange Server application client.

ACN0155E The Data Protection for Microsoft Exchange Server application client cannot work with the release of Tivoli Storage Manager API you have installed. Please install release *version.release.level* or greater.

Explanation: The release of the Tivoli Storage Manager API currently installed on the system is older than the release used to build the Data Protection for Microsoft Exchange Server application client.

System action: Processing ends.

User response: Install a release of the Tivoli Storage Manager API at or later than the indicated level. A copy is distributed with the Data Protection for Microsoft Exchange Server application client.

ACN0156E Could not load the Tivoli Storage Manager API.

Explanation: The Tivoli Storage Manager API could not be loaded.

System action: Processing ends.

User response: Ensure the Tivoli Storage Manager API is correctly installed. Run the Data Protection for Microsoft Exchange Server application client with the /TRACEFLAGS=API /TRACEFILE=filename options and view the tracefile to determine why it could not be loaded. Another possible cause is that the TSMAPI.DLL does not exist in the system directory. Re-install the Tivoli Storage Manager API, if this is the case.

ACN0160E An authentication error occurred with your stored Tivoli Storage Manager password.

Explanation: You were unable to log on to the Tivoli Storage Manager server due an authentication error.

System action: Processing stops.

User response: The stored Tivoli Storage Manager password may have become corrupted. Contact your Tivoli Storage Manager server administrator.

ACN0161E Authentication error. The password entered is not valid. You are not logged on to the Tivoli Storage Manager server.

Explanation: An incorrect password was entered.

System action: Processing stops.

User response: Enter the correct Tivoli Storage Manager password and try again.

ACN0162E The passwords entered do not match. Please enter them again.

Explanation: An incorrect password was entered.

System action: Processing stops.

User response: Enter the passwords again.

ACN0163E The directory path needs to be fully-qualified.

Explanation: The /intopath option was specified without a fully-qualified path.

System action: Processing stops.

User response: Enter the command again and specify a fully-qualified path in the /intopath option.

ACN0167E The fully-qualified file name is too long.

Explanation: An attempt was made to use a fully-qualified file name that was too long. This attempt failed.

System action: Processing ends.

User response: None

ACN0200E File (*filename*) could not be opened for reading.

Explanation: An attempt was made to open a file for reading. This attempt failed.

System action: Processing ends.

User response: None

ACN0201E File (*filename*) could not be opened for writing.

Explanation: An attempt was made to open a file for writing. This attempt failed.

System action: Processing ends.

User response: None

ACN0202E Read failure on file (*filename*).

Explanation: An attempt was made to read from a file. This attempt failed.

System action: Processing ends.

User response: None

ACN0203E Write failure on file (*filename*).

Explanation: An attempt was made to write to a file. This attempt failed.

System action: Processing ends.

User response: None

ACN0204E File (*filename*) could not be closed.

Explanation: An attempt was made to close a file. This attempt failed.

System action: Processing ends.

User response: None

ACN0205E File (*filename*) statistics could not be obtained.

Explanation: An attempt was made to obtain file statistics. This attempt failed.

System action: Processing ends.

User response: None

ACN0206E Directory (*directory*) could not be created.

Explanation: An attempt was made to create a directory. This attempt failed.

System action: Processing ends.

User response: None

ACN0207E Directory path (*directorypath*) is too long.

Explanation: An attempt was made to use a directory path that was too long. This attempt failed.

System action: Processing ends.

User response: None

ACN0208E There is not enough disk space for the operation attempted.

Explanation: An attempted operation required more disk space than was available. The attempt failed.

System action: Processing ends.

User response: None

ACN0209E The rename of file (*filename1*) to (*filename2*) failed.

Explanation: An attempt was made to rename a file. This attempt failed.

System action: Processing ends.

User response: None

ACN0210E The Tivoli Storage Manager high level qualifier is too long.

Explanation: An attempt was made to use a Tivoli Storage Manager high level qualifier that was too long. This attempt failed.

System action: Processing ends.

User response: None

ACN0211E The Tivoli Storage Manager low level qualifier is too long.

Explanation: An attempt was made to use a Tivoli Storage Manager low level qualifier that was too long. This attempt failed.

System action: Processing ends.

User response: None

ACN0212E The Tivoli Storage Manager filesystem name is too long.

Explanation: An attempt was made to use a Tivoli Storage Manager filesystem name that was too long. This attempt failed.

System action: Processing ends.

User response: None

ACN0213E The maximum number of objects allowed per Tivoli Storage Manager transaction is too small.

Explanation: In order to maintain backup data integrity, multiple backup objects are sent to the Tivoli Storage Manager server in a single transaction. The Tivoli Storage Manager server has indicated that the maximum number of objects allowed per transaction is less than the minimum required by the Data Protection for Microsoft Exchange Server application client.

System action: Processing ends.

User response: Increase the maximum number of objects allowed per transaction on the Tivoli Storage Manager server and retry the operation.

ACN0214E The backup object's management class backup copy group does not exist.

Explanation: The Tivoli Storage Manager server has indicated that the backup object's management class backup copy group does not exist.

System action: Processing ends.

User response: Contact your Tivoli Storage Manager server administrator.

ACN0215E All backup objects do not have the same management class backup copy destination.

Explanation: In order to maintain backup data integrity, multiple backup objects are sent to the Tivoli Storage Manager server within a single transaction. All backup objects within a single transaction are required to have the same management class backup copy destinations.

System action: Processing ends.

User response: Contact your Tivoli Storage Manager server administrator.

ACN0216E Unable to obtain space information for volume (*volumename*).

Explanation: An attempt was made to obtain space information for a volume. This attempt failed.

System action: Processing ends.

User response: None

ACN0217E The Tivoli Storage Manager filesystem name is invalid.

Explanation: The filesystem name or directory delimiter is invalid.

System action: Processing ends.

User response: Check that the filesystem name length, characters, and directory delimiters are valid.

ACN0218E The Tivoli Storage Manager high level qualifier is invalid.

Explanation: The high level qualifier name or directory delimiter is invalid.

System action: Processing ends.

User response: Check that the high level qualifier name length, characters, and directory delimiters are valid.

ACN0219E The Tivoli Storage Manager low level qualifier is invalid.

Explanation: The low level qualifier name or directory delimiter is invalid.

System action: Processing ends.

User response: Check that the low level qualifier name length, characters, and directory delimiters are valid.

ACN0256E The password in your Tivoli Storage Manager options file has expired. Please change your password on the Tivoli Storage Manager server using the 'change password' command and then either change or remove the password value in your options file.

Explanation: Your Tivoli Storage Manager password has expired. You need to change your password.

System action: Processing ends.

User response: Obtain a new password for your Tivoli Storage Manager server; node using the change password command or by asking your Tivoli Storage Manager Administrator to change your password.

ACN0257E Your password has expired.

Explanation: Your Tivoli Storage Manager password has expired. A new password needs to be obtained.

System action: Processing ends.

User response: Obtain a new password for your Tivoli Storage Manager node using the change password command or by asking your Tivoli Storage Manager Administrator to change your password.

ACN0258E You did not enter a valid password. Processing ends.

Explanation: The password that was entered was not a valid password.

System action: Processing ends.

User response: Re-enter the command specifying a valid password.

ACN0259E The password you entered for verification does not match the password you entered for your new password. Your password will not be changed.

Explanation: The password you entered for verification of your new password does not match the new password that was entered.

System action: Processing ends.

ACN0260I • ACN0300E

User response: Try again to change your password being sure to enter the same password for the new password and for the verification password.

ACN0260I Password successfully changed.

Explanation: The change password command completed successfully

System action: Processing ends.

User response: None

ACN0261I There are no backups for the server named *servername*.

Explanation: There are no backups on the Tivoli Storage Manager server for the specified server name.

System action: Processing ends.

User response: None

ACN0262E Errors occurred while processing the VSS operation. Examine the Windows Event Logs and DSMERROR.LOG for additional details.

Explanation: While attempting to process a VSS operation, an unexpected error occurred.

System action: Processing ends.

User response: Attempt to determine the source of the error by examining the Data Protection for Exchange log file, the TSM Client error log file (DSMERROR.LOG), the Windows Application Event Log, the Windows System Event Log, and the VSS provider log file, if applicable. Additional instructions for Windows VSS operations are located in the TSM Problem Determination Guide. Correct the problem and retry the operation. If this error persists, contact your service representative.

ACN0263E Failed to start Web browser with a return code of *returncode*.

Explanation: An attempt was made to start the web browser to view the TSM HTML book. This attempt failed.

System action: Processing ends.

User response: Start your web browser manually and point it to bookfrm.htm in the agent htm directory.

ACN0264I Could not find the default browser defined. An attempt will be made to use Microsoft Internet Explorer.

Explanation: An attempt was made to read the registry to determine the default browser. However, a default browser is not defined. A determination will be made where Microsoft Internet Explorer is installed.

System action: Processing continues.

User response: It is possible that a default browser is not defined for the system. This is okay. An attempt will be made to use Microsoft Internet Explorer.

ACN0265E Could not find Internet Explorer.

Explanation: An attempt was made to read the registry to determine where Microsoft's Internet Explorer was installed. This attempt failed.

System action: Processing ends.

User response: Make sure that the registry is set up correctly for Internet Explorer.

ACN0266E Could not find the Tivoli Storage Manager HTML books.

Explanation: An attempt was made to read the registry to determine where the Tivoli Storage Manager books were installed. This attempt failed.

System action: Processing ends.

User response: It may be necessary to reinstall the application client code. This will ensure that the registry entries are set up correctly.

ACN0267E The verify password entered does not match the new password entered.

Explanation: The verify password does not match the new password.

System action: Processing ends.

User response: Retry the command with a matching verify password.

ACN0292E An unknown error has been detected. *rc*

Explanation: An error occurred without an error message. The return code, *rc*, is displayed.

System action: Processing ends.

User response: Retry the operation. If this error persists, contact your service representative.

ACN0300E Invalid restore type.

Explanation: The type of restore requested is invalid.

System action: Processing ends.

User response: Re-enter the command specifying a valid restore type.

ACN0301E Invalid backup type.

Explanation: The type of backup requested is invalid.

System action: Processing ends.

User response: Re-enter the command specifying a valid backup type.

ACN0351E Invalid trace keyword - 'keyword'

Explanation: A TRACEFLAG option in the user configuration file or on the command line is incorrect.

System action: Client program did not initialize or tracing was not enabled in the applet.

User response: Correct the value.

ACN0357E Unable to open trace output file *file-name*.

Explanation: A TRACEFILE option in the user configuration file or on the command line used a directory path and *file-name* combination to which you do not have write access.

System action: Client program did not initialize.

User response: Change the TRACEFILE value so that it is a location to which you have write access.

ACN0366E Unable to close trace output file *file-name*.

Explanation: An error occurred during the closing of a trace output *file-name* (for example, not enough disk space).

System action: Processing continues.

User response: Check the options.doc file for a description of possible causes of the error, or see your system administrator.

ACN0367E Unable to write to trace file *tracefile*. Tracing disabled.

Explanation: An error occurred when writing to the specified *tracefile*.

System action: Tracing is disabled. Processing continues.

User response: Ensure the device that the *tracefile* access is available and has sufficient space for the tracefile. Retry the command.

ACN0368E Invalid trace file name (name too long).

Explanation: A TRACEFILE option in the preferences files used a file name that is too long.

System action: Client program did not initialize.

User response: Change the file name used as the

TRACEFILE so that it is equal to or less than 255 characters in length.

ACN0383E Specifying the trace file 'link' as a symbolic link is not allowed.

Explanation: Trace file '*linkname*' cannot be a symbolic link.

System action: The symbolic link '*linkname*' is deleted, the trace file is recreated, and processing stops.

User response: Specify the trace file location with the 'tracefile' option.

ACN0384E Symbolic link '*linkname*' to '*target*' was successfully deleted.

Explanation: Log '*linkname*' cannot be a symbolic link.

System action: The symbolic link '*linkname*' is deleted, the log is recreated, and processing stops.

User response: Check the location of the new file. To specify the location of log files, refer to the user's manual for the 'errorlogname' option, the 'schedlogname' option, and the 'DSM_LOG' environmental variable.

ACN0385E Unable to delete symbolic link '*link*'.

Explanation: Log '*linkname*' cannot be a symbolic link.

System action: Processing stops.

User response: Delete the symbolic link '*linkname*'.

ACN0476E *program-name*: cannot open file *file-spec*: *error*.

Explanation: DP cannot open the file.

System action: DP cannot complete the requested operation.

User response: Retry the operation. If the problem continues, check with your system administrator.

ACN0487E Specifying the error log 'link' as a symbolic link is not allowed.

Explanation: Error log '*linkname*' cannot be a symbolic link.

System action: The symbolic link '*linkname*' is deleted, the error log is recreated, and processing stops.

User response: Check the location of the new error log. To specify the location of the error logs, refer to the user's manual for the 'errorlogname' option and 'DSM_LOG' environmental variable.

ACN0488E Initialization functions cannot open the error log: *log-name*. **errno** = *errno-value*,

Explanation: The file *log-name* could not be opened during initialization. The system set the error code *errno-value*. If the reason given is "access denied," the current user does not have permission to write to the log in the directory specified. It is also possible that no space is available at the given log location.

System action: Processing terminates.

User response: Set the DSM_LOG (or DSMI_LOG) environment variable to a directory into which the current user can write. You may also use the ERRORLOGNAME option to specify a file to which the current has write permission.

ACN0495E Failure writing to a Tivoli Storage Manager log or log-related file: *file-name*, **errno** = *errno-value*, *reason*

Explanation: A failure was encountered when writing to one of the log files or a related file named *file-name*. The system set the error code *errno-value*. *reason* is the system explanation of that error code. Among other things, it is possible that no space is available at the given log location.

System action: Processing terminates.

User response: Set the DSM_LOG (or DSMI_LOG) environment variable to a directory with adequate space to write the log data.

ACN0496I DP is converting the *log-file* from continuous (pruning) mode to wrapping mode. This process may take several minutes.

Explanation: The *log-file* was previously in continuous mode where the only size control was through the use of ERRORLOGRETENTION or SCHEDLOGRETENTION option. This is the first occasion where ERRORLOGMAX or SCHEDLOGMAX is specified for this log, so its format must be changed and old data saved.

System action: Transition processing continues.

User response: None.

ACN0497I DP is converting the *log-file* from wrapping mode to continuous (pruning) mode. This process may take several minutes.

Explanation: The *log-file* was previously in wrapping mode where the size control was through the use of the ERRORLOGMAX or SCHEDLOGMAX option. This is the first occasion where ERRORLOGMAX or SCHEDLOGMAX is not specified for this log, so its format must be changed and old data saved.

System action: Transition processing continues.

User response: None.

ACN0498I *count* log records processed.

Explanation: This is just a progress report to let you know the process is still ongoing.

System action: Transition processing continues.

User response: None.

ACN0501E Invalid Proxy Configuration Detected: Target Node '*targetnode*' is not listed as a valid node to proxy to for Node Name '*nodename*'.

Explanation: The proxy node configuration on the TSM Server is not correct to support this VSS operation.

System action: The VSS operation stops.

User response: Contact the TSM Server administrator to have the correct TSM Server GRANT PROXY commands issued to enable proxy authority for the nodes. If the error persists, contact your service representative.

ACN0515E Invalid DSMAGENT Node configuration found for node '*dsmagentnode*'.

Explanation: The DSMAGENT Node specified is not configured properly.

System action: The VSS operation stops.

User response: Verify that the DSMAGENT Node specified is correct and that the Client Acceptor Daemon (CAD) is running for the DSMAGENT Node. If the error persists, contact your service representative.

ACN0516I The Windows console event handler received a '*event*' console event.

Explanation: A console event was received by one of the Data Protection for Microsoft Exchange Server processes or programs. The following events can be received:

- Ctrl-C - This indicates either the user entered the ctrl-c sequence or that one of the Windows services was stopped.

System action: None.

User response: None.

ACN0517I An unexpected error was encountered. DP function name : *function-name* DP function : *function-desc* DP return code : *TSM-rc* DP file : *file-name* (*line-number*)

Explanation: None.

System action: Processing stops.

User response: Contact the DP administrator with the information provided in this message.

ACN0518E Backups selected for restore must have the same backup location (TSM or LOCAL).

Explanation: A VSS restore operation was submitted that specified multiple backup objects. The backup objects chosen had different backup locations. This is not allowed. All backup objects submitted in the same VSS restore operation must have the same backup location, either TSM or LOCAL, but not both.

System action: The VSS restore operation stops.

User response: Retry the VSS restore operation specifying one backup object at a time.

ACN0519E The VSS operation failed with rc = *returncode*.

Explanation: There was a failure when TSM performed the VSS operation.

System action: The VSS operation stops.

User response: Verify that the TSM Client Acceptor Daemon (CAD) is installed, configured, and running properly on the machine. Retry the operation. If the error persists, contact your service representative.

ACN0520E Failed to connect to Local DSMAGENT Node '*localdsmagentnode*' at address:port '*address:portnumber*'. Verify that the TSM Client Acceptor Daemon (CAD) is installed, configured, and running properly.

Explanation: An attempt was made to connect to the TSM Client Acceptor Daemon (CAD) running on the local machine. A communication error occurred when this connection was attempted.

System action: The operation stops.

User response: In order to perform VSS operations, you must have a TSM Client Acceptor Daemon (CAD) and a TSM Remote Client Agent Service (DSMAGENT) installed and configured properly. In addition, the TSM Client Acceptor Daemon (CAD) must be running. Verify that the TSM Client Acceptor Daemon (CAD) is installed, configured, and running properly on the local machine. If the error persists, contact your service representative.

ACN0521E Pruning functions cannot open one of the Tivoli Storage Manager prune files: *log-name*. *errno* = *errno-value*,

Explanation: The file "*log-name*" could not be opened during pruning. The system set the error code *errno-value*. If the reason given is "access denied," the current user does not have permission to write to the file in the directory specified. It is also possible that no space is available at the given file location or another Tivoli Storage Manager process started by different user id is performing pruning at the same time.

System action: Pruning stops, processing continues.

User response: Set the DSM_LOG (or DSMI_LOG) environment variable to a directory into which the current user can write.

ACN0522E DIAG:

Explanation: The message text is provided for diagnostic purposes and is meant to provide information to IBM support in problem determination.

System action: None.

User response: None.

ACN0524S Error '*errtxt*' (*errno=errno*) occurred trying to write to audit log '*file-name*'. The audit log function is disabled.

Explanation: There was an error encountered writing to the audit log (for example, there is not enough space on the disk).

System action: Audit logging is disabled for the rest of the operation. The return code for the operation is set to 12 to indicate that the contents of the audit log are incomplete.

User response: If this is an out of space condition either free up space on the volume or try to write the audit log to a volume with more space.

ACN0555E Invalid number of snapshots:

Explanation:

System action: Policy was not created.

User response: Specify a number in the range: range: 1...9999 or NOLimit

ACN0556E Invalid number of days:

Explanation:

System action: The Policy was not created.

User response: Specify a number in the range: range: 0...9999 or NOLimit

ACN0571E The specified policy was not found:
'policy'

Explanation:

System action:

User response: Please make sure that the specified policy exists.

ACN0572E The specified policy already exists:
'policy'

Explanation:

System action: Policy was not created.

User response: Enter a different name for the policy.

ACN0573E The specified policy could not be updated: 'policy'

Explanation: This is due to a problem in virtual server database.

System action:

User response: Make sure that FCM is configured correctly.

ACN0574E The specified policy could not be deleted: 'policy'

Explanation: This is due to a problem in virtual server database.

System action:

User response: Make sure that FCM is configured correctly.

ACN0575E The specified policy could not be created: 'policy'

Explanation: This is due to a problem in virtual server database.

System action:

User response: Make sure that FCM is configured correctly.

ACN0576I There were no items found.

Explanation: The query completed successfully, but no results were found.

System action: None.

User response: Change the specified search criteria.

ACN0581E Volume *volume-name* could not be locked.

Explanation: The system call to lock the volume failed.

System action: Processing stopped.

User response: Please verify that no other application is accessing the volume. During restore of an image DP must have exclusive use of the volume.

ACN0583E Invalid name of policy specified. Valid input characters include alphanumeric characters and underscore.

Explanation:

System action: Policy was not created.

User response: Please specify a valid name.

ACN0585E Unable to connect to the TSM Client Acceptor Daemon (CAD).

Explanation: Possible causes of this message include: The TSM Client Acceptor Daemon (CAD) is not running. The VSSALTSTAGINGDIR option setting in the TDP option file is not set to the same value as the VSSALTSTAGINGDIR option setting in the Data Protection for Microsoft Exchange Server Remote Client Agent Service (DSMAGENT) option file. They must be set to the same value for successful TDP operations.

System action: The VSS operation stops.

User response: Ensure that the TSM Client Acceptor Daemon (CAD) is running. Ensure that the VSSALTSTAGINGDIR option setting in the TDP option file is set to the same value as the VSSALTSTAGINGDIR option setting in the Data Protection for Microsoft Exchange Server Remote Client Agent Service (DSMAGENT) option file. After correcting the VSSALTSTAGINGDIR option inconsistency, retry the TDP operation.

ACN0588E The value for the BACKUPDESTINATION option is not allowed. Data Protection for Microsoft Exchange Server is only licensed to run data protection operations to a Tivoli Storage Manager server. It is not licensed to backup or to restore locally managed snapshots.

Explanation: The value for the configuration option is not allowed. The only allowed value is TSM. Data Protection for Microsoft Exchange Server is only licensed to run data protection operations to a Tivoli Storage Manager server. It is not licensed to backup or to restore locally managed snapshots.

System action: Processing ends.

User response: Set the backup destination to TSM. In

order to create and restore local VSS backups it is required to use and install a fully-featured valid license or to purchase an upgrade, and install Tivoli Storage FlashCopy Manager. If you use Data Protection for Microsoft Exchange Server it is also required to purchase and install IBM Tivoli Storage Manager for Copy Services - Microsoft Exchange VSS Integration Module.

ACN0589E You are not allowed to set REMOTEDSMAGentnode option. Data Protection for Microsoft Exchange Server is not licensed to perform offloaded VSS backups.

Explanation: The REMOTEDSMAGentnode option is used to perform offloaded VSS backups.

System action: The operation stops.

User response: In order to perform offloaded VSS backups install a valid fully-featured license. If you use Data Protection for Microsoft Exchange Server it is also required to purchase and install IBM Tivoli Storage Manager for Copy Services - Microsoft Exchange VSS Integration Module. Contact your service representative to find out purchase details.

ACN0590E A Data Protection communication error with the Tivoli Storage Manager server has occurred.

Explanation: Communications with the Tivoli Data Protection server has been lost.

System action: The operation stops.

User response: Correct the TCP/IP communications error with the Tivoli Storage Manager server and retry the operation.

ACN0591I Data Protection communications with the Tivoli Storage Manager server has been successfully recovered.

Explanation: Communications with the Tivoli Data Protection server has been successfully recovered.

System action: None.

User response: Continue with normal operations.

ACN0592E The Data Protection TCP/IP session with the Tivoli Storage Manager server was canceled.

Explanation: The Data Protection TCP/IP session with the Tivoli Storage Manager server was cancelled.

System action: The operation stops.

User response: Correct the reason the Tivoli Storage Manager server administrator cancelled the session and retry the operation.

ACN0593E Data Protection for Microsoft Exchange Server is not licensed to perform offloaded VSS backups.

Explanation: Currently installed license does not allow to perform offloaded VSS backups. In order to use this feature it is necessary to install a valid fully-featured license.

System action: The operation stops.

User response: In order to perform offloaded VSS backups install a valid fully-featured license. If you use Data Protection for Microsoft Exchange Server it is also required to purchase and install IBM Tivoli Storage Manager for Copy Services - Microsoft Exchange VSS Integration Module. Contact your service representative to find out purchase details.

ACN0594E You cannot perform offloaded VSS backups in TSM Server independent environment.

Explanation: OFFLOAD option is not available in TSM Server independent environment.

System action: The operation stops.

User response: In order to perform offloaded VSS backups you have to configure Tivoli Storage FlashCopy Manager to manage snapshot backups using a Tivoli Storage Manager server. To do this you can use Tivoli Storage Manager configuration wizard.

ACN0595E The options file '*optfile*' does not exist. It is required for proper operation.

Explanation: The specified TSM API options file could not be found. It is required in order to complete the command.

System action: Processing ends.

User response: Make sure to complete Tivoli Storage Manager configuration and try the operation again.

ACN0598E The application cannot run in safe mode.

Explanation: The application requires either Services or Drivers that are not available when running in safe mode.

System action: The application processing stops.

User response: Restart the system using the normal startup. When the system is started, run the application.

ACN0599E The application cannot establish a remote powershell connection.

Explanation: The application attempted to establish a remote powershell connection. The operation failed.

System action: The application processing stops.

User response: Verify you are using the correct credentials. For more information, see the Microsoft about_Remote_Troubleshooting Help topic.

ACN0601E There is a problem that causes processing to stop. To identify the source of the problem and the solution, look for details in the service level trace file.

Explanation: This problem occurs when either the local or remote Powershell cmdlet or script reports an error. Details about the error are not available until more trace file information is analyzed.

System action: Application processing stops.

User response: To identify the problem, look for information in the service level trace files. For more information about viewing trace files, see the Troubleshooting section of the technical documentation provided with the software.

ACN3500I Data Protection for Exchange: Starting backup type backup of object name from server server name.

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log when a backup is started.

System action: None

User response: None Centrally logged

ACN3501I Data Protection for Exchange: backup type backup of object name from server server name completed successfully. bytes bytes sent in seconds seconds.

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log when a backup completes successfully.

System action: None

User response: None Centrally logged

ACN3502E Data Protection for Exchange: backup type backup of object name from server server name failed, rc = return code.

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log when a backup fails.

System action: None

User response: None Centrally logged

ACN3503I Data Protection for Exchange: backup type backup of storage group name from server server name was cancelled by the user.

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log when a storage group backup was cancelled by the user.

System action: None

User response: None Centrally logged

ACN3504I Data Protection for Exchange: Starting restore for server servername.

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the start of a restore.

System action: None

User response: None Centrally logged

ACN3505I Data Protection for Exchange: Restore from server servername to servername is complete. Total backups restored: Total bytes transferred: Elapsed processing time: Secs Throughput rate: Kb/Sec

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the end of a restore.

System action: None

User response: None Centrally logged

ACN3506I Data Protection for Exchange: Starting backup type restore of storage group storage group name to server server name.

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the start of a storage group restore.

System action: None

User response: None Centrally logged

ACN3507I Data Protection for Exchange: backup type restore of storage group storage group name to server server name completed successfully.

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log when a storage group restore completes successfully.

System action: None

User response: None Centrally logged

ACN3508E **Data Protection for Exchange: backup type restore of storage group *storage group name* to server *server name* failed, rc = *return code*.**

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log when a storage group restore fails.

System action: None

User response: None Centrally logged

ACN3509I **Data Protection for Exchange: backup type restore of storage group *storage group name* to server *server name* was cancelled by the user.**

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log when a storage group restore was cancelled by the user.

System action: None

User response: None Centrally logged

ACN3510I **Data Protection for Exchange: Attempting to inactivate the object: *filesystem - [filesystem name]*, *hl - [high level]*, *ll - [low level]***

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the attempt to inactivate an object.

System action: None

User response: None Centrally logged

ACN3511I **Data Protection for Exchange: Inactivation of the previous objects succeeded.**

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the success of the inactivation of objects.

System action: None

User response: None Centrally logged

ACN3512E **Data Protection for Exchange: Inactivation of the previous objects failed.**

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the failure of the inactivation of objects.

System action: None

User response: None Centrally logged

ACN3513E **Data Protection for Exchange: Inactivation of the previous objects was canceled.**

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the failure of the inactivation of objects because the task was canceled by the user.

System action: None

User response: None Centrally logged

ACN3514I **Data Protection for Exchange: Starting backup for server *servername*.**

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the start of a backup.

System action: None

User response: None Centrally logged

ACN3516I **Data Protection for Exchange: Backup of server *servername* is complete. Total storage groups backed up: Total bytes transferred: Elapsed processing time: Secs Throughput rate: Kb/Sec**

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the end of a backup request.

System action: None

User response: None Centrally logged

ACN3517E **Data Protection for Exchange: Backup of server *servername* failed, rc = *returncode*.**

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the failure of a backup request.

System action: None

User response: None Centrally logged

ACN3518I **Data Protection for Exchange: Backup of server *servername* failed. The request was canceled by the user.**

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the failure of a backup request. The user canceled the backup.

System action: None

User response: None Centrally logged

ACN3528E Data Protection for Microsoft Exchange Server is only licensed to run data protection operations to a Tivoli Storage Manager server. It is not licensed to back up or to restore using locally managed snapshots.

Explanation: Currently installed license allows to create and restore only TSM VSS backups. In order to create backups and to restore local VSS backups, Data Protection for Exchange verifies that the Exchange Server supports VSS backup (that is, it is at least Exchange Server 2003), and that a valid fully-featured license is installed.

System action: The operation stops.

User response: In order to create and restore local VSS backups it is required to purchase and install a fully-featured valid license. NOTE: If you use Data Protection for Microsoft Exchange Server it is also required to use and install IBM Tivoli Storage Manager for Copy Services - Microsoft Exchange VSS Integration Module or to purchase an upgrade, and install Tivoli Storage FlashCopy Manager. If IBM Tivoli Storage Manager for Copy Services - Microsoft Exchange VSS Integration Module is installed, there will be a license file, "acsex.lic", in the Data Protection for Microsoft Exchange Server installation directory.

ACN5050I A new configuration file has been created.

Explanation: The /configfile value specified a file name that does not exist. A new file has been created.

System action: Processing continues.

User response: None.

ACN5051I The configuration file cannot be found, using default settings.

Explanation: The /configfile value specified a file that cannot be found. Default settings will be used.

System action: Processing continues using default settings.

User response: Ensure that the configuration file exists, and enter the command again.

ACN5052E An error occurred trying to set the preference preference.

Explanation: An error occurred while writing to the preferences file.

System action: Processing ends.

User response: View any other messages that were displayed. Fix any of the problems indicated and enter the command again.

ACN5053E The value for the preference preference is not valid. See the TDPEXCC HELP SET output or the User's Guide for valid SET command parameters.

Explanation: The preference being set is not valid.

System action: Processing ends.

User response: Run the "tdpexcc help set" command or see the User's Guide for valid SET command parameters.

ACN5054I The preference has been set successfully.

Explanation: The preference was set successfully.

System action: Processing ends.

User response: None

ACN5055E The Microsoft Exchange API could not be loaded.

Explanation: If running on Microsoft Exchange 5.5, the dll that is attempting to load is edbbcli.dll. If running on a later version of Microsoft Exchange, the dll that is attempting to load is esebcli2.dll.

System action: Processing ends.

User response: Ensure that the Microsoft Exchange Server has been correctly installed.

ACN5056I The logfile log file could not be pruned. Processing will continue.

Explanation: An attempt to prune the log was unsuccessful.

System action: Processing continues.

User response: Ensure that the log file name is valid and that the log file exists. If a valid log file name was specified, view the log for indications of what the problem may be.

ACN5057I The logfile log file has been pruned successfully.

Explanation: The specified log file was pruned successfully.

System action: Processing continues.

User response: None.

ACN5058W The length of the log file name is greater than the maximum allowed. Processing will continue using a log file name of logfile in the current directory.

Explanation: The log file name entered was not fully qualified. When the fully qualified log file name was

created, it was longer than the maximum allowed length for a log file name.

System action: Processing continues creating and using a log file in the current directory.

User response: Update the log file name using a fully qualified path.

ACN5059W The *logfile* log file cannot be opened for writing. There will be no logging of events.

Explanation: The specified log file could not be opened for append and logging of events will not occur. The log file may be read-only or the log file name is not valid.

System action: Processing continues without logging.

User response: Determine why the log could not be opened. You may need to ensure that the log file is not read-only, or ensure that a valid drive or partition is specified in the log file name.

ACN5060E A Tivoli Storage Manager API error has occurred.

Explanation: A Tivoli Storage Manager API api error has occurred.

System action: Processing ends.

User response: Try the operation again. If the error persists, contact your service representative.

ACN5061E A Microsoft Exchange api error has occurred.

Explanation: A Microsoft Exchange api error has occurred.

System action: Processing ends.

User response: Try the operation again. If the error persists, contact your service representative.

ACN5062E The version of Microsoft Exchange that is running is not a supported version for IBM Tivoli Storage Manager for Mail.

Explanation: IBM Tivoli Storage Manager for Mail has detected a version of Microsoft Exchange Server that is not supported.

System action: Processing ends.

User response: Refer to the software requirements section of the product documentation to view a list of the supported versions of Microsoft Exchange Server. If the version of Microsoft Exchange Server running is a supported version, try the operation again. If the error persists, contact your service representative.

ACN5063E An error occurred trying to get the Microsoft Exchange version information. It could be a problem with the registry. Or, a Microsoft Exchange Server is not installed on this machine.

Explanation: An attempt was made to read the registry to determine the level of Microsoft Exchange that is currently running. This attempt failed.

System action: Processing ends.

User response: Determine if the registry has been corrupted. Also, ensure that the Microsoft Exchange Server is installed on this machine.

ACN5064W The *service* cannot be started when doing a restore.

Explanation: A request was made to restore the listed database. However, the service associated with this database has already started. The service needs to be stopped in order to do this restore.

System action: Processing ends.

User response: Stop the associated service and enter the restore command again.

ACN5065E All of the services associated with this restore are running.

Explanation: A request was made to restore several databases. However, all of the services associated with these databases are running. The services need to be stopped in order to do this restore.

System action: Processing ends.

User response: Stop the associated services and enter the restore command again.

ACN5066W The storage group <*storagegroup*> does not exist.

Explanation: The storage group that was entered that does not exist on the server specified.

System action: Processing ends.

User response: Enter the command specifying a storage group that exists.

ACN5067E The specified databases do not exist or have not been dismantled.

Explanation: The mailbox databases that were entered either do not exist on the Microsoft Exchange Server or have not been dismantled.

System action: Processing ends.

User response: Verify that the mailbox databases exist and that the databases have been dismantled before starting the restore.

ACN5068W The database <dbname> does not exist in the storage group <storagegroup>.

Explanation: The database that was entered does not exist in the storage group that was entered.

System action: Processing ends.

User response: Enter the command again specifying a valid database name that exists in a valid storage group.

ACN5069W The database <database> in the storage group <storage group> is not dismantled.

Explanation: While examining the list of databases to restore, it was determined that not all of the databases within the specified storage groups were dismantled.

System action: Processing continues skipping over the listed databases and storage groups.

User response: Ensure that the databases are dismantled and enter the command again.

ACN5070W The Directory Service is not running. The Directory will not be backed up.

Explanation: A request was made to backup the Directory service. However, the Directory service needs to be running in order to do the backup.

System action: Processing ends.

User response: Start the Directory service and enter the backup command again.

ACN5071W The Information Store is not running. The Information Store will not be backed up.

Explanation: A request was made to backup the Information Store. However, the Information Store needs to be running in order to do the backup.

System action: Processing ends.

User response: Start the Information Store and enter the backup command again.

ACN5072W Database <component name> is dismantled -- skipping.

Explanation: A request was made to back up a set of databases. However, some databases are not mounted. The databases need to be mounted for the backup to proceed.

System action: Processing continues, but the dismantled databases are skipped.

User response: Ensure that the database you want to back up is mounted.

ACN5073E None of the databases are backed up.

Explanation: The request to back up a set of databases could not be completed because at least one of the following conditions is true: 1) all of the databases are dismantled 2) a backup is in progress on another replica 3) a backup has been made more recently than specified by the /MINimumbackupinterval parameter

System action: Processing stops.

User response: Ensure that the database you want to back up is mounted, or another backup is not in progress, or change the /MINimumbackupinterval parameter.

ACN5074E The databases entered do not exist, or were entered with the wrong capitalization.

Explanation: A request was made to back up a set of databases that do not exist, or the database names might not have been entered using the correct capitalization.

System action: Processing stops.

User response: Check the capitalization and spelling of the databases and enter the backup command again.

ACN5076W Unable to inactivate all previous backup objects.

Explanation: A request to inactivate some previous backup objects failed.

System action: Processing ends.

User response: When the next full backup of the database is run, another attempt will be made to inactivate the failed objects.

ACN5083I All of the storage groups entered have been excluded.

Explanation: An attempt was made to do a backup. However, the storage groups or databases entered have been excluded by an exclude statement in the options file.

System action: Processing ends.

User response: If you want these storage groups or databases backed up, modify the exclude statements in your options file.

ACN5084W IS was not input as one of the parts to restore. The partial option will be ignored.

Explanation: A request was made to restore either the private or public part of the Information Store. However, the IS was not input as one of the parts to restore.

System action: Processing continues ignoring the partial option.

User response: To restore either the public or private part of the Information Store, enter IS as an input.

ACN5086W None of the storage groups entered exist. Or, if doing a DBCOPY backup, the database entered does not exist.

Explanation: A storage group was entered that does not exist on the server specified. Or, if a DBCOPY backup was entered, the dbname specified does not exist on the Microsoft Exchange Server.

System action: Processing ends.

User response: Enter the command specifying a storage group or dbname that exists.

ACN5087E The PASSWORDACCESS parameter is set to GENERATE, but either the stored password is incorrect or there is no stored password. If you do not have a stored password, use the -TSMPassword=xxx option to set and store your password.

Explanation: The client options file has the PASSWORDACCESS option set to GENERATE. Currently, there is no password stored. An initial password must be stored.

System action: Processing stops.

User response: Enter the command again using the -TSMPassword option. After doing so, subsequent commands will not require a password.

ACN5135I Data Protection for Exchange: Backup of server *servername* is complete. Total storage groups backed up: Total storage groups deduplicated: Total bytes inspected: Total bytes transferred: Total LanFree bytes transferred: Total bytes before deduplication: Total bytes after deduplication: Data compressed by: %% Deduplication reduction: %% Total data reduction ratio: %% Elapsed processing time: Secs Throughput rate: Kb/Sec

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the end of a backup request.

System action: None

User response: None Centrally logged

ACN5136I Data Protection for Exchange: Restore from server *servername* to *servername* is complete. Total backups restored: Total bytes transferred: Total LanFree bytes transferred: Elapsed processing time: Secs Throughput rate: Kb/Sec

Explanation: This is an informational message that is written to the Tivoli Storage Manager Server activity log indicating the end of a restore.

System action: None

User response: None Centrally logged

ACN5140I Database *<database>* does not exist - skipping.

Explanation: The database that was specified by the user is not found on this Exchange server.

System action: This database is skipped.

User response: Ensure that the database name is spelled correctly and enter the command again.

ACN5141I Database *<database>*, Storage Group *<storagegroup>* does not exist - skipping.

Explanation: This combination of storage group and database name that was specified is not found on this Microsoft Exchange server.

System action: The storage group and database are skipped.

User response: Ensure that the the storage group name and database name are spelled correctly and enter the command again.

ACN5142E The requested database was not found.

Explanation: The databases could not be found on this Microsoft Exchange server.

System action: Processing stops.

User response: Ensure that the database names are spelled correctly and enter the command again.

ACN5209I There are no backups matching the server name *servername* and the following filespecs:*filespecs*.

Explanation: There are no database backups on the Tivoli Storage Manager server for the specified server name.

System action: Processing stops.

User response: None if there are no backups; otherwise, check your spelling and try again.

ACN5228I The LOCALDSMAGENTNODE preference is not set correctly.

Explanation: Data Protection for Exchange has not been configured to perform VSS operations. The LOCALDSMAGENTNODE preference is not set correctly.

System action: Processing stops.

User response: Ensure that the LOCALDSMAGENTNODE preference is set correctly. This preference can be set by running the configuration wizard.

ACN5229E An error occurred while obtaining VSS information from the following Local DSMAGENT Node: 'localdsmagentnode'.

Explanation: Data Protection for Exchange attempted to obtain VSS information through the specified LOCALDSMAGENTNODE, but failed. The specific error message encountered is also displayed.

System action: VSS information is not displayed.

User response: Refer to the error message displayed along with this message.

ACN5237E Unable to communicate with the Microsoft Exchange Server.

Explanation: An attempt was made to communicate with the Microsoft Exchange Server that was entered. This connection attempt failed.

System action: Processing stops.

User response: Ensure that the name of the Microsoft Exchange Server that was entered is valid. Also, ensure that the Microsoft Exchange Server is running and that the Exchange services are started.

ACN5238E Unable to retrieve the domain information for the Microsoft Exchange Server.

Explanation: An attempt was made to retrieve the domain information for the Microsoft Exchange Server. This attempt failed.

System action: Processing ends.

User response: Ensure that the Microsoft Exchange server is running.

ACN5239E Unable to retrieve the component information.

Explanation: An attempt was made to retrieve the storage group or mailbox database information for the Microsoft Exchange Server. This attempt failed.

System action: Processing ends.

User response: Ensure that the Microsoft Exchange Server is running properly.

ACN5240E Unable to retrieve database information.

Explanation: Data Protection for Exchange tried to retrieve database information from Microsoft Exchange Server, but this attempt failed.

System action: Processing stops.

User response: Ensure that Microsoft Exchange Server is running properly.

ACN5241E The Microsoft Exchange Information Store is currently not running.

Explanation: Data Protection for Exchange tried to retrieve information about the Microsoft Exchange Server Information Store, but this attempt failed.

System action: Processing stops.

User response: To retrieve the Microsoft Exchange Server information, the Microsoft Exchange Information Store must be running. Start or restart this service to get the requested information.

ACN5301E Unable to get the value for the Organization from the registry.

Explanation: An attempt was made to read the registry to determine the organization for the Microsoft Exchange Server. This attempt failed.

System action: Processing ends.

User response: Determine if there is a problem with the registry or ensure that the Microsoft Exchange Server is installed properly.

ACN5302E Unable to get the value for the Site from the registry.

Explanation: An attempt was made to read the registry to determine the site for the Microsoft Exchange Server. This attempt failed.

System action: Processing ends.

User response: Determine if there is a problem with the registry or ensure that the Microsoft Exchange Server is installed properly.

ACN5303E Unable to get the value for Circular Logging from the registry.

Explanation: An attempt was made to read the registry to determine the Circular Logging setting for either the IS or the DIR of the Microsoft Exchange Server. This attempt failed.

System action: Processing ends.

User response: Determine if there is a problem with

the registry or ensure that the Microsoft Exchange Server is installed properly.

ACN5304E Unable to open a Microsoft Exchange service to determine if it is running.

Explanation: An attempt to open a service failed.

System action: Processing stops.

User response: Check your Microsoft Exchange services and ensure that they are running properly.

ACN5305E Unable to query service information.

Explanation: An attempt to query specific service information failed.

System action: Processing stops.

User response: Check your Microsoft Exchange services and ensure that they are running properly.

ACN5350E An unknown Exchange error has occurred.

Explanation: An Exchange error has occurred. The Windows Event Log may contain more information.

System action: Processing stops.

User response: If the Windows Event Log does not help resolve the problem, verify the Exchange Server installation and retry the operation.

ACN5351E The Exchange server application is not registered for backup.

Explanation: The Exchange server application must be registered for backup with the Windows Server. The Windows NT event log may contain more information.

System action: Processing ends.

User response: If the Windows NT event log does not help resolve the problem, verify the Exchange Server installation and retry the operation. If the error persists, contact your service representative.

ACN5352E The Exchange server application is not registered for offline restore.

Explanation: The Exchange server application must be registered for offline restore with the Windows Server. The Windows NT event log may contain more information.

System action: Processing ends.

User response: If the Windows NT event log does not help resolve the problem, verify the Exchange Server installation and retry the operation. If the error persists, contact your service representative.

ACN5353E The Exchange server application is not registered for online restore.

Explanation: The Exchange server application must be registered for online restore with the Windows Server. The Windows NT event log may contain more information.

System action: Processing ends.

User response: If the Windows NT event log does not help resolve the problem, verify the Exchange Server installation and retry the operation. If the error persists, contact your service representative.

ACN5354E The storage group was not found.

Explanation: The specified storage group name was not found.

System action: Processing ends.

User response: Verify the command input and retry the operation. If the error persists, contact your service representative.

ACN5355E The database was not found. Ensure that the database exists and is spelled correctly with proper capitalization.

Explanation: The specified database name was not found.

System action: Processing stops.

User response: Ensure that the database exists and is spelled correctly with proper capitalization, and retry the operation.

ACN5356E The database file name is undefined.

Explanation: Every Microsoft Exchange database must specify a database file name.

System action: Processing stops.

User response: Verify the database properties and retry the operation.

ACN5357W The truncation of the transaction log failed.

Explanation: The truncation of the transaction log failed.

System action: Processing continues.

User response: Refer to other messages that are displayed to determine the problem.

ACN5358E A Microsoft Exchange API protocol error has occurred.

Explanation: An unrecoverable Microsoft Exchange API protocol error has occurred.

System action: Processing ends.

User response: Contact your service representative.

ACN5359E Unable to get the TEMP environment variable. Ensure that the environment variable is set and retry the operation.

Explanation: An attempt was made to get the TEMP environment variable for this system. This attempt failed.

System action: Processing stops.

User response: Ensure that the environment variable is set and retry the operation.

ACN5360E The /RECOVer=APPLYRESToredlogs option is not allowed during a partial restore.

Explanation: A partial restore was requested with the /RECOVer=APPLYRESToredlogs option. The /RECOVer=APPLYRESToredlogs option is not allowed during a partial restore.

System action: Processing ends.

User response: Enter the command to restore the entire component or enter the command without the /RECOVer=APPLYRESToredlogs option.

ACN5361E It is invalid to have an '*' within a storage group name.

Explanation: An attempt was made to backup a storage group that contains an '*'. It is invalid to have an '*' in a storage group name.

System action: Processing continues, but this storage group will not be backed up.

User response: Rename the storage group, otherwise this storage group cannot be backed up.

ACN5362W The filesystem <filesystem> in an invalid filesystem name.

Explanation: The filesystem displayed in the message exists, but is an invalid filesystem.

System action: Processing continues, but this filesystem will not be used.

User response: Ensure that the database name does not contain invalid characters. Refer to the Microsoft Exchange documentation for the list of invalid characters.

ACN5500E The MultiByteToWideChar() function failed.

Explanation: An internal error occurred.

System action: Processing stops.

User response: Retry the operation.

ACN5501E The WideCharToMultiByte() function failed.

Explanation: An internal error occurred.

System action: Processing ends.

User response: Retry the operation. If this error persists, contact your service representative.

ACN5502E The restore destination directory path needs to be fully-qualified. Enter the command again and specify a fully-qualified path for the /INTO option.

Explanation: The /INTO option was specified without a fully-qualified path.

System action: Processing stops.

User response: Enter the command again and specify a fully-qualified path for the /INTO option.

ACN5705W An error was encountered with Tivoli Storage Manager API initialization, rc = *returncode*. Examine the dserror.log for more information or determine if the TSM Client is installed properly.

Explanation: An attempt was made to run setup for the Tivoli Storage Manager API. However, errors were encountered. The API is a component of the backup-archive client, which is also known as the VSS Requestor.

System action: Processing continues.

User response: Examine the dserror.log file to find out more information about the problem. If this file does not exist, it is possible that the TSM API is not installed properly. If this is the case, uninstall the TSM Client and re-run the configuration wizard.

ACN5706I The *logfile_name* log file did not need pruning.

Explanation: The log file specified did not exceed the maximum log size and did not need to be pruned.

System action: The log file is not changed.

User response: The log file will automatically be pruned at a later date. If the log file is too large now, lower the number of days the log entries are retained.

ACN5707W The *logfile_name* log file could not be opened for writing. The log was not pruned and there will be no logging of events.

Explanation: The log could not be opened for append. Therefore, there will be no logging done and the request to prune was not done.

System action: Processing continues without logging and without pruning.

User response: Determine why the log could not be opened. You may need to ensure that the file is not read-only, or ensure that a valid drive or partition is specified with the log file name.

ACN5724I No databases have been selected for backup.

Explanation: The Backup button was pressed but no databases have been selected in the list in the graphical user interface.

System action: Processing stops.

User response: Select a database and press the Backup button.

ACN5725I No components have been selected for backup.

Explanation: The Backup button was pressed but no components have been selected in the tree or list in the graphical user interface.

System action: Processing stops.

User response: Select a component and press the Backup button.

ACN5741I No Backups have been selected for restore.

Explanation: The Restore button was pressed but nothing was selected in the tree or list view.

System action: Processing stops.

User response: Make a selection in the tree or list view and press the Restore button again.

ACN5758W At least one of the database's services that is selected for restore is running. Do you want to stop the service(s)?

Explanation: A service that you are trying to restore is running. The service cannot be running in order to perform the restore.

System action: None

User response: Choose the desired response and continue.

ACN5759W At least one of the databases that is selected for restore is mounted. Do you want to dismount the database(s)?

Explanation: A database you are trying to restore is mounted.

System action: None

User response: Click 'OK' to dismount and continue, or cancel to stop.

ACN5766E Unable to dismount database *database* in storage group *storage group*. Do you want to continue the restore process?

Explanation: An error occurred while trying to dismount a database.

System action: None.

User response: Press OK to continue the restore or press cancel to stop.

ACN5798E MS Exchange API *api name* failed with HRESULT: *api retcode*. Check the Windows Application Event log for more details.

Explanation: A Microsoft Exchange API error occurred during an operation. The specific API function that failed, along with the HRESULT code of the failure and possible message associated with that error, is displayed.

System action: Processing stops.

User response: If the Windows Event Log does not help to resolve the problem, stop and restart the Exchange Information Store and retry the operation.

ACN5800E The backup is corrupt. See log file for additional information.

Explanation: When attempting to process an Exchange backup on the Tivoli Storage Manager Server, not all required objects were present. The operation cannot proceed. The specific backup affected is logged.

System action: Processing stops.

User response: Retry the operation with a different backup.

ACN5805E The restore failed. The file already exists. Delete the existing files or specify a different restore (/INTO) path.

Explanation: The specified file already exists in the restore (/INTO) path. The RESTOREFILES command is designed not to overwrite existing files.

System action: The restore operation fails and processing ends.

User response: If you want to restore the specified file, you must first delete the file that exists in the restore (/INTO) path and retry the operation or specify a different restore (/INTO) path and retry the operation.

ACN5810E Restoring Legacy backups and VSS backups in the same restore operation is not supported. Retry the restores in separate operations.

Explanation: At least one VSS backup object and one Legacy backup object were selected for a restore in the same operation. This is not supported.

System action: The restore operation is canceled.

User response: Retry the restores specifying the Legacy backups and VSS backups in separate operations.

ACN5811E Invalid command. Data Protection for Exchange invalid backup type for a VSS backup request. Supported types are full, copy, diff, and incr.

Explanation: An invalid backup type was specified on the VSS backup request. Refer to your Data Protection for Exchange User's Guide for supported backup types.

System action: The backup operation is canceled.

User response: Retry the backup operation specifying a supported VSS backup type. Supported types are full, copy, diff, and incr.

ACN5812E Invalid command. Data Protection for Exchange does not support OFFLOAD with the Legacy backup method.

Explanation: The OFFLOAD option was specified when using the Legacy backup method. Data Protection for Exchange does not support offload with the Legacy backup method. Data Protection for Exchange supports offload with the VSS backup method only.

System action: The backup operation is canceled.

User response: Retry the backup operation without specifying the offload option or by specifying the VSS backup method.

ACN5813E Invalid command. Data Protection for Exchange only supports Legacy backups with a backup destination of TSM.

Explanation: An invalid backup destination was specified with the Legacy backup method. Data Protection for Exchange only supports a backup destination of TSM when using the Legacy backup method.

System action: The backup operation is canceled.

User response: Retry the backup operation specifying a backup destination of TSM.

ACN5814E Invalid command. Data Protection for Exchange does not support OFFLOAD with the combination specified for backup destination and version of Windows.

Explanation: The OFFLOAD option was specified with an unsupported backup destination. Data Protection for Exchange only supports offload with a backup destination of TSM or if running on a Windows System 2008 or later, backup destination LOCAL, TSM or BOTH.

System action: The backup operation is canceled.

User response: Retry the VSS offloaded backup operation specifying a backup destination of TSM.

ACN5815E The VSS operation failed with rc = *returncode*. Check the dsmerror.log file and the Windows Event log for more details. The VSS Provider logs might also contain more information.

Explanation: There was a failure when Data Protection for Exchange performed the VSS operation.

System action: The VSS operation stops.

User response: Check the dsmerror.log file and the Windows Event log for more details. The VSS Provider logs might also contain more information. If problems persist, verify that the Client Acceptor Daemon (CAD) is installed, configured, and running properly on the machine. If necessary, uninstall the TSM Client and re-run the configuration wizard to reinstall the Client Acceptor Daemon.

ACN5816E Data Protection for Exchange is not able to run VSS operations. You must be running Exchange Server 2010 or later.

Explanation: In order to perform VSS operations, Data Protection for Exchange verifies that the Exchange Server level is at least Exchange Server 2010.

System action: The operation stops.

User response: Verify that the prerequisites identified above are met and retry the operation.

ACN5817E Missing, blank, or invalid Local DSMAGENT Node Name is not allowed.

Explanation: To run VSS operations, Data Protection for Exchange verifies that the Local DSMAGENT Node Name is specified and valid. This error indicates that the Local DSMAGENT Node Name is missing, blank, or invalid.

System action: Processing stops.

User response: Set the Local DSMAGENT Node Name to a valid value and retry the operation.

ACN5818E Invalid command. Data Protection for Exchange only supports restoring VSS backup types of full, copy, diff, and incr.

Explanation: An invalid backup type was specified on the VSS restore request. Data Protection for Exchange supports restoring backups of type full, copy, diff, and incr.

System action: The restore operation is canceled.

User response: Retry the restore operation specifying a supported VSS backup type.

ACN5819E Multiple backup objects were found for the specified components and backup destination. Use the /OBJECT= and /BACKUPDESTINATION= options to identify which specific backup object to restore.

Explanation: The backup object specified for the VSS restore operation was not specific enough to be unique. More information is required to restore the correct backup object.

System action: The restore operation is canceled.

User response: Retry the restore operation specifying the /OBJECT= and /BACKUPDESTINATION= parameters.

ACN5820E There were no Exchange backups found on the Tivoli Storage Manager server matching the specified criteria.

Explanation: A query was issued to the Tivoli Storage Manager server to find the Data Protection for Exchange backups that match the specified search criteria. No backups were found.

System action: None.

User response: Retry the operation using different criteria.

ACN5821T Please note the following implications before performing VSS restore: 1. Even if a Recovery Storage Group exists, it will NOT be used for this restore. The data will be restored directly to the production storage groups. 2. ALL mounted databases within the chosen storage group(s) will be dismounted, not just the databases selected for restore. 3. If the chosen VSS backups are LOCAL and reside on devices that support VSS Instant Restore, ALL data on the production source volumes will be overwritten, INCLUDING the current Exchange transaction logs. 4. If the chosen VSS backups are LOCAL, and there are more than one backup generations that reside on Space-Efficient target VDisks on Storwize or SVC 5.1 or later storage devices, then ALL newer generations of LOCAL VSS backups INCLUDING the currently selected will be deleted during VSS Instant Restore. Please find out more details in the Installation and User Guide of Data Protection for Microsoft Exchange Server. NOTE: Notices (3) and (4) do not apply if the 'Disable VSS Instant Restore' checkbox is selected. Do you want to continue with the VSS restore operation?

ACN5824I Storage Group <storagegroup> does not have replica - skipping.

Explanation: Replica for the storage group specified by the user is not found on this Exchange server.

System action: This storage group is skipped.

User response: Ensure that the storage group name is spelled correctly and has a replica and enter the command again.

ACN5825E Invalid command. Data Protection for Exchange does not support FROMREPLICA with the Legacy backup method.

Explanation: The FROMREPLICA option was specified when using the Legacy backup method. Data Protection for Exchange does not support fromreplica with the Legacy backup method. Data Protection for Exchange supports fromreplica with the VSS backup method only.

System action: The backup operation is canceled.

User response: Retry the backup operation without specifying the fromreplica option or by specifying the VSS backup method.

ACN5829E Invalid command. Data Protection for Exchange does not support INTOSG with the Legacy restore method.

Explanation: The INTOSG option was specified when using the Legacy restore method. Data Protection for Exchange does not support INTOSG with the Legacy restore method. Data Protection for Exchange supports INTOSG with the VSS restore method only.

System action: The restore operation is canceled.

User response: Retry the restore operation without specifying the INTOSG option or by specifying the VSS restore method.

ACN5836T Please note the following implications before performing VSS restore: 1. ALL mounted databases within the storage group(s) being restored into will be dismantled, not just the databases selected for restore. 2. If the chosen VSS backups are LOCAL and reside on devices that support VSS Instant Restore, ALL data on the production source volumes will be overwritten, INCLUDING the current Exchange transaction logs. 3. If the chosen VSS backups are LOCAL, and there are more than one backup generations that reside on Space-Efficient target VDisks on Storwize or SVC 5.1 or later storage devices, then ALL newer generations of LOCAL VSS backups INCLUDING the currently selected will be deleted during VSS Instant Restore. Please find out more details in the Installation and User Guide of Data Protection for Microsoft Exchange Server. NOTE: Notices (2) and (3) do not apply if the 'Disable VSS Instant Restore' checkbox is selected. Do you want to continue with the VSS restore operation?

ACN5837E Invalid command. Data Protection for Exchange does not support INTOSG with the Exchange Servers earlier than Exchange 2007.

Explanation: The INTOSG option was specified when using not Exchange 2007 or later. Data Protection for Exchange does not support INTOSG with the Exchange Servers earlier than Exchange 2007. Data Protection for Exchange supports INTOSG with the Exchange Server 2007 or later.

System action: The restore operation is canceled.

User response: Retry the restore operation without specifying the INTOSG option or by using Exchange 2007.

ACN5839E Alternate or recovery database you are restoring to does not exist.

Explanation: The alternate or recovery database that was specified does not exist on the Microsoft Exchange Server.

System action: Processing stops.

User response: Verify that the target database exists and the database has been dismantled before retrying the restore.

ACN5840W Did not find any storage group on Exchange Server that has all databases that matched databases selected to alternate restore. Verify that all necessary databases are created in the alternate storage group then try calling the dialog again.

Explanation: Did not find any storage group on Exchange Server that has all databases that matched databases selected to alternate restore.

System action: The Restore Into dialog is not pop up.

User response: Verify that all necessary databases are created in the alternate storage group then try calling the dialog again.

ACN5841W Database *database* from storage group *storagegroup* has not been found on Exchange Server. The database files will be restored.

Explanation: Database has not been found on Exchange Server. The restore will continue to allow VSS writer to restore the database files.

System action: The restore operation continues.

User response: After the restore completed, you can recreate the database on the Exchange Server from the restored files.

ACN5843I No backups were found for the database *<database>* that match the specifications entered. Check that the database name, backup destination, and OBJECT parameters are correct.

Explanation: No backups found for the specified database that match specified backup destination or OBJECT (if any).

System action: This database is skipped.

User response: Ensure that the database name is spelled correctly, backup destination and OBJECT (if any) are specified correctly and enter the command again.

ACN5892E **Recovery Storage Group does not exist. Please create the Recovery Storage Group and add the appropriate mailbox databases to be recovered.**

Explanation: On Exchange 2003, the Recovery Storage Group must be created before running mailbox restore.

System action: The mailbox restore operation has failed.

User response: Use System Manager to create the Recovery Storage Group and add the appropriate mailbox databases to be recovered. Ensure that the RSG databases are dismounted, and the 'This database can be overwritten by a restore' flag has been set. Run the command again.

ACN5893E **Mailbox restore failed. Please verify that the appropriate databases have been added to the Recovery Storage Group (RSG), the RSG databases are dismounted, and the 'This database can be overwritten by a restore' flag has been set.**

Explanation: On Exchange 2003, the Recovery Storage Group must be created appropriately before running mailbox restore.

System action: The mailbox restore operation has failed.

User response: Use System Manager to create the Recovery Storage Group and add the appropriate mailbox databases to be recovered. Ensure that the RSG databases are dismounted, and the 'This database can be overwritten by a restore' flag has been set. Run the command again.

ACN5901E *mapi32.dll* **does not exist. If necessary, reinstall the Microsoft MAPICDO download.**

Explanation: The Messaging Application Programming Interface (MAPI) library *mapi32.dll* is required for mailbox restore operations.

System action: The mailbox restore operation fails.

User response: Verify that the *mapi32.dll* file is installed on the system. Run the command again.

ACN5902E *mapi32.dll* **has version *version.release*. Expected *expected version.expected release* or higher. Download and install the latest Microsoft MAPICDO download and retry the operation.**

Explanation: The correct version of Messaging Application Programming Interface (MAPI) library *mapi32.dll* is required for mailbox restore operations.

System action: The mailbox restore operation has failed.

User response: Verify that the correct version of *mapi32.dll* is installed on the system. Run the command again.

ACN5906E **Loading the MAPI dynamic load library has failed. If necessary, reinstall the Microsoft MAPICDO download.**

Explanation: The *mapi32.dll* is required for mailbox restore operations.

System action: The mailbox restore operation fails.

User response: Verify that the *mapi32.dll* is installed on the system. Run the command again.

ACN5907E **Initializing the MAPI subsystem failed. Verify that the *mapi32.dll* is installed on the system and that MAPI is enabled for your mailboxes.**

Explanation: The MAPI subsystem is necessary for mailbox restore operations.

System action: Processing stops.

User response: Verify that the *mapi32.dll* is installed on the system and that MAPI is enabled for your mailboxes. Run the command again.

ACN5908E **Creating the MAPI profile has failed. Ensure that you have Organization Management privileges, and that you have an active mailbox.**

Explanation: MAPI requires a user with an active Exchange mailbox and Organization Management privileges to perform mailbox restore operations.

System action: Processing stops.

User response: Either log on as a user with Organization Management privileges, or add an active mailbox for the current user.

ACN5909E **The MAPI subsystem logon has failed. Check that you have an active mailbox and Organization Management privileges for this operation.**

Explanation: Mailbox restore operations require a user with Organization Management privileges, and an active Exchange mailbox.

System action: Processing stops.

User response: Either log on as a user with Organization Management privileges, or add an active mailbox for the current user.

ACN5910E Opening a MAPI mailbox has failed.

Explanation: Data Protection for Exchange attempted to open a mailbox using MAPI, but the operation failed. The MAPI mailbox was not opened.

System action: Processing stops.

User response: The following causes are some of the more common causes of this error:

- Mailbox does not exist Resolution: Create the necessary mailbox.
- Mailbox has never been sent to or logged in to Resolution: Ensure that the mailbox is active by logging in to it or by sending at least one message to the mailbox.
- Mailbox database is not mounted Resolution: Verify that the mailbox is mounted, and mount it if it isn't already mounted.
- Insufficient privilege to access mailbox Resolution: Ensure that the administrative ID that you are using to restore data has the correct privileges, and has an active mailbox on the system. Microsoft Exchange 2003 requires Exchange Administrators and Local Administrators permissions, and Microsoft Exchange 2007 requires Exchange Organization Administrators, Local Administrators. Microsoft Exchange 2010 requires Organization Management and Local Administrators permissions to resolve this issue.
- Exchange server where mailbox database is located is not available or down Resolution: Verify that access to Exchange Server using Exchange Management Console (Exchange 2007) or Exchange System Manager (Exchange 2003).
- Microsoft Information Store service is not running Resolution: Verify that Microsoft Exchange Information Store service is running through computer management Services. Start the service if it is not running.
- Microsoft Exchange System Attendant service is not running Resolution: Verify that Microsoft Exchange System Attendant service is running through computer management Services. Start the service if it is not running.

ACN5911E The MAPI subsystem has experienced a network failure. Verify that you are accessing the correct Exchange server, and that the Exchange server has the Client Access Role installed. Also check that the /CLIENTACCESSSERVER parameter is correct.

Explanation: Data Protection for Exchange tried to connect to Exchange, but experienced a network failure.

System action: Processing stops.

User response: Verify that you are accessing the correct Exchange server, and that the Exchange server has the Client Access Role installed. Also check that the

/CLIENTACCESSSERVER parameter is correct.

ACN5912E The MAPI subsystem has experienced a failure.

Explanation: The MAPI subsystem has experienced an unknown error.

System action: Processing stops.

User response: The problem is most likely a problem with the configuration of the recovery user's mailbox or the MAPI configuration on your system. Verify that both meet the requirements specified in your user documentation.

ACN5915W Unable to obtain the Microsoft Exchange Server version running on your system. Microsoft Exchange 2010 is being assumed. Unexpected results may occur.

Explanation: An attempt was made to determine the level of Microsoft Exchange Server running on the current system. This attempt failed.

System action: Processing continues. However, unexpected results may occur.

User response: If the operation fails or produces unexpected results, verify that Microsoft Exchange Server is correctly installed on the system, and retry the operation.

ACN5916E You must add one or more mailboxes to be restored before continuing.

Explanation: No mailboxes were selected for restore.

System action: No mailboxes were restored.

User response: Add one or more mailboxes to be restored before continuing.

ACN5917I The mailbox history has been successfully updated on the TSM Server.

Explanation: The mailbox location history stored on the TSM Server was compared to the current mailbox location information in the Active Directory and updated accordingly. This operation is performed to help facilitate individual mailbox restore operations.

System action: None

User response: None

ACN5918W The mailbox history did not update successfully on the TSM Server.

Explanation: An attempt was made to update the mailbox location history stored on the TSM Server. This operation is performed to help facilitate individual

mailbox restore operations. Problems were encountered during the update attempt.

System action: The mailbox history is not updated, but processing continues.

User response: Verify the following:

- the Active Directory configuration
- the Data Protection for Exchange node username and password
- the proxynode configuration on the TSM Server

ACN5920E Cannot restore mailboxes from different Exchange Server 2003 storage groups. Please restore mailboxes from each storage group separately.

Explanation: All Exchange Server 2003 mailboxes selected must come from the same storage group.

System action: No mailboxes were restored.

User response: Perform the mailbox restore operation with mailboxes from a single Exchange Server 2003 storage group. Repeat as necessary for each of the other storage groups.

ACN5921E Data Protection for Exchange requires a user with Organization Management privileges. For mailbox restores, the user must also have an active mailbox.

Explanation: Mailbox restore operations requires a user with Organization Management privileges, and an active Exchange mailbox.

System action: Processing stops. No mailboxes are restored.

User response: Either log on as a user with a mailbox that has Organization Management privileges, or add an active mailbox for the current user.

ACN5922E The mailbox 'mailboxname' was not found.

Explanation: The mailbox specified for the mailbox restore operation or the destination mailbox was not found in the Active Directory or in the mailbox history information stored on the TSM Server.

System action: The specified mailbox is not restored.

User response: Verify that the specified mailbox name is correct. Make sure that you are using the mailbox alias when specifying the mailbox name. After correcting the mailbox name, retry the mailbox restore operation. If this mailbox restore is for a deleted or moved mailbox, you might retry the mailbox restore operation using the 'MAILBOXOriglocation' option. Also, make sure that the database is restored into the recovery database properly.

ACN5923E An unknown mailbox name was specified or the mailbox backup was not found in the recovery database. Verify that the mailbox name is correct. If the specified mailbox name is correct, verify that it has been successfully backed up.

Explanation: The mailboxes specified for the mailbox restore operation were not found in the Active Directory or in the mailbox history information stored on the TSM Server. If the specified mailboxes exist in Active Directory, then the database backup was not found.

System action: The specified mailboxes are not restored.

User response: Verify that the specified mailbox names are correct. Make sure that you are using the mailbox alias when specifying the mailbox names. After correcting the mailbox names, retry the mailbox restore operation. If this mailbox restore is for a deleted or moved mailbox, you might retry the mailbox restore operation using the 'MAILBOXOriglocation' option. Also, make sure that the database is restored into the recovery database properly. If specified mailbox name is correct, verify that it has been successfully backed up.

ACN5924E There were no usable backups found.

Explanation: The mailbox restore operation failed because no usable backups were found.

System action: No mailboxes are restored.

User response: Verify that you have specified the correct TCPServeraddress and node name, and retry the operation.

ACN5929E The Microsoft Exchange Server MAPI Client and Collaboration Data Objects (MAPICDO) download is not installed. Download and install the latest Microsoft MAPICDO from the Microsoft website before running mailbox restore operations.

Explanation: Microsoft Exchange Server MAPI Client and Collaboration Data Objects (MAPICDO) download is required for mailbox restore operations.

System action: The specified mailboxes are not restored.

User response: Verify that the Microsoft Exchange Server MAPI Client and Collaboration Data Objects (MAPICDO) download is installed.

ACN5930E The requested MAPI message service was not found.

Explanation: The MAPI message service was not found. This is most likely due to the service not being defined in your local MAPISVC.INF file.

System action: The mailbox restore operation has failed.

User response: Verify that the requested MAPI message service is defined in your local MAPISVC.INF file. If this error resulted from trying to restore to a Personal Folders (.pst) file, look for the section "MSPST MS" in this file. If it is not defined, add the message service to your MAPISVC.INF file and run the command again.

ACN5931E You must specify an alternate destination folder before continuing.

Explanation: A destination folder is required for restoring to an alternate destination.

System action: The mailbox restore operation could not continue.

User response: Supply an alternate destination folder. Run the command again.

ACN5932E The recovery database cannot be created because the TEMP environment variable is set to an invalid directory.

Explanation: The TEMP environment variable is set to an invalid directory.

System action: Processing stops.

User response: Verify that the TEMP environment variable points to valid and accessible directory and try again.

ACN5934E Mailbox GUID '*mailboxguid*' is associated with the disconnected mailbox '*mailboxname*'.

Explanation: DP for Exchange attempted to update mailbox GUID in order to perform mailbox restore. The GUID is already associated with another mailbox and cannot be set for the mailbox being processed. This condition usually occurs when restoring mailboxes that were previously deleted.

System action: Processing ends.

User response: Purge or reconnect the disconnected mailbox and re-try the operation.

ACN5935W The mailbox restore operation completed successfully; however not all of the mailbox items were restored. Run the mailbox restore operation again on the mailboxes that reported partial completion, or use mailbox filters to restore a smaller subset of messages.

Explanation: The mailbox restore operation has only partially completed. The messages that were restored were restored correctly, but some items were not restored. This failure might be because there were too many items to restore in one operation.

System action: Processing stops.

User response: Run the mailbox restore operation again on the mailboxes that reported partial completion, or use mailbox filters to restore a smaller subset of messages.

ACN5948E An attempt to query detailed managed capacity failed.

Explanation:

System action:

User response:

ACN5963E An attempt to query total managed capacity failed.

Explanation:

System action:

User response:

ACN5975E A valid FlashCopy Manager license file could not be located. Data protection operations to a FlashCopy Manager virtual server are not allowed.

Explanation: To perform data protection operations to a FlashCopy Manager virtual server, a valid license for FlashCopy Manager must be installed in the FlashCopy Manager installation directory. This license file is named fcmclient.lic.

System action: Processing stops.

User response: Verify that the fcmclient.lic file is installed and retry the operation.

ACN5976E A valid Data Protection for Exchange license file could not be located. Data Protection for Exchange is not licensed to run data protection operations to a Tivoli Storage Manager server. With the current licenses only data protection operations to a FlashCopy Manager stand-alone server can be run. Use the configuration wizard to install or locate the proper license.

Explanation: To perform data protection operations to a Tivoli Storage Manager server, a valid license for Data Protection for Exchange (called exclient.lic) must be installed. The Data Protection for Exchange license should be installed in the Data Protection for Exchange installation directory.

System action: Processing stops.

User response: Use the configuration wizard to install or locate the proper license.

ACN5977E The /BACKUPDESTINATION parameter cannot be 'TSM' when performing data protection operations using a FlashCopy Manager stand-alone server.

Explanation: Data protection commands default to /BACKUPDESTINATION=LOCAL when performed against a FlashCopy Manager stand-alone server. The FlashCopy Manager supports no other values for these parameters. It is not necessary to specify this parameter.

System action: Processing stops.

User response: Retry the command removing the /BACKUPDESTINATION parameter.

ACN5983E The MAPI subsystem has experienced a failure. There are not enough system resources to complete the selected operation.

Explanation: There are not enough system resources to complete the selected operation. The Windows Application Event log may contain more information.

System action: Processing stops.

User response: Ensure there are sufficient system resources and run the command again.

ACN5986I Database <component> has circular logging enabled. Cannot perform incremental or differential backup - skipping.

Explanation: The database that was specified by the user has circular logging enabled. Incremental or differential backup is not possible.

System action: This database is skipped.

User response: Ensure that the database specified does not have circular logging enabled and run the command again if you want to perform incremental or differential backups.

ACN5987E Storage Group *storage group name* cannot be created. Another Storage Group with the same name exists on the Exchange Server or the maximum number of Storage Groups has been exceeded.

Explanation: Data Protection for Exchange cannot create a new Storage Group because another Storage Group with the same name exists on the Exchange Server. Or maximum number of Storage Groups has been exceeded.

System action: Processing stops.

User response: Remove the storage group and re-try the operation.

ACN5988E Folder Tree *folder tree name* cannot be created.

Explanation: Data Protection for Exchange cannot create a new Folder Tree because another Folder Tree with the same name exists on the Exchange Server.

System action: Processing stops.

User response: Remove the Folder Tree and re-try the operation.

ACN5993E This version of Exchange does not support streaming (legacy) backups.

Explanation: Support for streaming (legacy) backups was discontinued starting with Exchange Server 2010.

System action: The operation stops.

User response: Use the VSS method of backing up the Exchange databases.

ACN5994E Data Protection for Exchange is only licensed to run data protection operations to a Tivoli Storage Manager server. It is not licensed to back up using locally managed snapshots.

Explanation: To back up using locally managed snapshots, a valid FlashCopy Manager license is required or the Tivoli Storage Manager for Copy Services - Microsoft Exchange VSS Integration Module must be installed.

System action: Processing stops.

User response: Change the backup destination to backup to a Tivoli Storage Manager server or obtain the products or licenses necessary to enable this feature

ACN6010T Unable to dismount database *database*. Do you want to continue the restore process?

Explanation: An error occurred while trying to dismount a database.

System action: None.

User response: Press OK to continue the restore or press cancel to stop.

ACN6012W The *database*; database has not been found on the Exchange Server. The database files will be restored. After the restore completes, you can recreate the database on the Exchange Server from the restored files.

Explanation: The database has not been found on the Exchange Server. The restore will continue to allow VSS writer to restore the database files.

System action: The restore operation continues, but only the files are restored.

User response: After the restore completes, you can recreate the database on the Exchange Server from the restored files.

ACN6027E *mapi32.dll* has build version *build version*. Expected *expected build version* or higher.

Explanation: The correct build version of Messaging Application Programming Interface library *mapi32.dll* is required for mailbox restore operations.

System action: The mailbox restore operation has failed.

User response: Verify that the correct build version of *mapi32.dll* is installed on the system. Run the command again.

ACN6028W *<database name>* is a DAG passive database not in Healthy state -- skipping.

Explanation: A request was made to back up a Database Availability Group (DAG) passive database. The DAG passive database is not in a Healthy state. In order to back up a DAG passive database, it must be in a Healthy state.

System action: Processing continues, but the specified database is skipped.

User response: Ensure that the DAG passive database is in a Healthy state and retry the backup operation.

ACN6029W At least one item that has passive database copies was specified for restore. When restoring this type of database, care must be taken in handling the database copies. Consult the Data Protection for Exchange documentation for details.

Explanation: When restoring a Database Availability Group (DAG) database, additional steps must be taken in order to suspend the database copy and update the database copy prior to bringing it online.

System action: None.

User response: Consult the Data Protection for Exchange or Microsoft documentation for details.

ACN6030W At least one item that has passive database copies was specified for restore. When restoring this type of database, care must be taken in handling the database copies. If you have not prepared the passive database copies for restore or are unsure of the necessary steps, please consult the Data Protection for Exchange documentation for details. Do you want to continue with the restore operation?

Explanation: When restoring a Database Availability Group (DAG) database, additional steps must be taken in order to suspend the database copy and update the database copy prior to bringing it online.

System action: None.

User response: Consult the Data Protection for Exchange or Microsoft documentation for details.

ACN6031I Excluding *<databaseType>* database *<databaseName>* from backup list because of option *<optionName>*-- skipping.

Explanation: A backup command has been issued where the option */EXCLUDEDNONDAGDbs*, */EXCLUDEDAGACTive*, */EXCLUDEDAGPASsive*, */MINimumbackupinterval* or */PREFERDAGPASsive* has been specified. The database has met the exclude option criteria and is skipped from backup.

System action: Processing continues, but the specified database is skipped.

User response: None.

ACN6032E Cannot restore mailbox because there is an existing recovery database *recovery database name* on the Exchange Server.

Explanation: Data Protection for Exchange cannot restore the mailbox because there already is an existing recovery database on the Exchange Server.

System action: Processing stops.

User response: Remove the existing recovery database from the Exchange Server. Run the command again.

ACN6033E The option /MOUNTDatabases=yes was specified without /RECOVer option.

Explanation: A restore command has been issued where the option /MOUNTDatabases=yes but the option /RECOVer was not specified. This is an invalid combination.

System action: Processing Stops

User response: Issue a restore command without /MOUNTDatabases=yes if you do not intent to apply logs.

ACN6038I Excluding storage group <databaseName> from backup list -- skipping.

Explanation: A backup command has been issued where the option /EXCLUDESG has been specified. The storage group has met the exclude option criteria and will be skipped from backup.

System action: Processing continues, but the specified storage group is skipped.

User response: None.

ACN6039E An error has occurred while mounting or dismounting a database.

Explanation: An error was detected while mounting or dismounting a database.

System action: Errors were detected while mounting or dismounting a database.

User response: Please check the Windows Event Log for any Exchange errors. If this was a mount problem during a restore, please verify the correct /RECOVer option value was used, and the correct sequence of the Exchange transaction logs. Please resolve any problems, and retry the operation. If the errors persist, contact your service representative.

ACN6040W Component <component> requires a full backup. Data Protection for Exchange can not perform an incremental or differential backup - skipping.

Explanation: The component that was specified by the user requires a full backup. An incremental or differential backup is not allowed until a full backup is performed. This situation can occur if a new storage group or database has been added and a full backup has not yet been performed.

System action: This component is skipped.

User response: Perform a full backup on the specified component as soon as possible.

ACN6055W Excluded item <databaseName> is not valid. It will be ignored.

Explanation: A backup command was issued with either the /EXCLUDESG or /EXCLUDEDB option. An item specified in the exclude statement is not a valid item. It will be ignored.

System action: A warning is displayed and processing continues.

User response: Correct the invalid item specified on the exclude option for future operations.

ACN6065E The mount backup command failed. Verify that a valid mount point and backup is specified. For more information, see the dsmdir.log file.

Explanation: The mount backup command failed. The backup specified might be mounted. In addition, the drive to map to might be in use. The directory to contain the mount point directories for all snapshots needs to be an empty NTFS directory that does not contain hidden system files or directories.

System action: Processing stops.

User response: Check to make sure that the backup specified is not mounted and that the drive to map to is available. Repeat the command using an empty NTFS directory as the snapshots mount points directory.

ACN6066E The UNMOUNT BACKUp command failed. The specified backup might not be mounted. For more information, see the dsmdir.log file.

Explanation: The UNMOUNT BACKUp command failed. The specified backup might not be mounted, or there may be a different error.

System action: Processing stops.

User response: Check to make sure that the backup specified is mounted. If so, see the dsmdir.log file and take the appropriate action.

ACN6067E In the component list that is specified, the following object is not valid: 'object'. Verify the volume and mount point names are correctly identified and spelled correctly.

Explanation: The command that is entered includes a component list. The list of components contains one or more invalid objects. For example, when entering a BACKUP or RESTORE command, if the component list includes a volume or mount point that is not valid or is not eligible for back up, this message is displayed. In addition, the GUID volume name cannot be specified. For RESTORE, MOUNT BACKUP, or DELETE BACKUP commands, this message is displayed if the

ACN6068I • ACN6086W

component list contains a backup specification that is not found in the backup inventory.

System action: Processing stops.

User response: Verify the correct syntax is used when entering the command. If the message is displayed again, verify the volume and mount point names are correctly identified. A misspelling can trigger this message.

ACN6068I *<databaseName>* is being backed up by a different server -- skipping.

Explanation: A Database Availability Group (DAG) database is skipped from backup if another copy of the same database is being backed up by a different server.

System action: Processing continues, but the specified database is skipped.

User response: Check whether the database is being backed up by a different server. Also check that there is not another instance of tdpexcc.exe or other backup running.

ACN6076I *<databaseName>* cannot be backed up because its 'BackupInProgress' flag is set to 'True'. Check whether the database is being backed up by a different server -- skipping.

Explanation: A Database Availability Group (DAG) database is skipped from backup if its 'BackupInProgress' flag is set to "True" by Exchange server.

System action: Processing continues, but the specified database is skipped.

User response: Check whether the database is being backed up by a different server. Also check that there is not another instance of tdpexcc.exe or other backup running.

ACN6080E Conflict option:

Explanation: This message displays the command that was entered, up to and including the conflict option that was detected.

System action: Processing ends.

User response: Re-enter the command specifying valid command options.

ACN6081E Missing, blank, or invalid REMOTEDSMAGENTnode is not allowed. Set the REMOTEDSMAGENTnode option to a valid value and retry the operation.

Explanation: In order to run VSS operations, Data Protection for Exchange verifies that the Remote

DSMAGENT Node Name is specified and valid. This error indicates that the Remote DSMAGENT Node Name is missing or blank. Also, the Remote DSMAGENT Node Name cannot be the same as the Local DSM Agent Node Name.

System action: Processing stops.

User response: Set the REMOTEDSMAGENTnode to a valid value and retry the operation.

ACN6082I The following options are deprecated and will be ignored: *deprecatedOption*

Explanation: The option you entered is deprecated. Data Protection for Exchange ignores the option and processing continues.

System action: Data Protection for Exchange ignores the option and processing continues.

User response: If appropriate, update your scripts to remove references to any deprecated options.

ACN6083W Database *<component name>* is a recovery database -- skipping.

Explanation: A request was made to back up a set of databases. However, some databases are recovery databases. Recovery databases cannot be backed up.

System action: Processing continues, but the recovery databases are skipped.

User response: Do not specify recovery databases to be backed up.

ACN6086W The following values for the mailboxfilter option are not supported and the options are ignored: *unsupportedfilter*

Explanation: The mailboxfilter option entered is not supported. Data Protection for Exchange ignores the filter and processing continues.

System action: Data Protection for Exchange ignores the filter and processing continues.

User response: Provide supported value for mailboxfilter option

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®

Access this wiki at <https://www.ibm.com/developerworks/servicemanagement/sm/index.html>.

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

Find information about upcoming Tivoli Support Technical Exchange webcasts at http://www.ibm.com/software/sysmgmt/products/support/supp_tech_exch.html. Replays of previous webcasts are also available.

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>
- **TSM:** <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

View available education at <http://www.ibm.com/software/tivoli/education>.

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>.

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>. 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/>. 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>.

You can also install the stand-alone IBM Support Assistant application on any workstation. You can then enhance the application by installing product-specific plug-in modules for the IBM products that you use. Find add-ons for specific products at <http://www.ibm.com/support/docview.wss?uid=swg27012689>.

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/>.

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/>, 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 40.

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:

- **Online:** Go to the Passport Advantage website at <http://www.ibm.com/software/lotus/passportadvantage/>, click **How to enroll**, and follow the instructions.
- **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> 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.

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

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

For critical, system-down, or severity 1 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> and click **Contacts**.

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/tsminfo/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>) 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.

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, 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.

C

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.

CAD See client acceptor daemon.

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 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.

collocation

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.

Collocation can reduce the number of volumes that must be accessed when a large amount of data must be restored.

collocation group

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

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 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.

F

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 the file 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.

L

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, rebind.

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, 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.

N

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 also 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.

O

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.

P

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.

R

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.

S

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, 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.

T

tape 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

See Transmission Control Protocol/Internet Protocol.

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.

V**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.

W

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.

WPAR See workload partition.

WWN See worldwide name.



Product Number: 5608-E06

Printed in USA