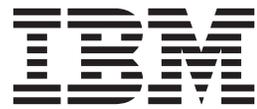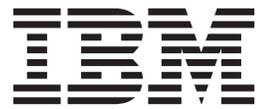IBM Tivoli Storage Manager
for z/OS Media
Version 6.3

Installation and Configuration Guide

IBM

IBM Tivoli Storage Manager
for z/OS Media
Version 6.3

Installation and Configuration Guide

Contents

Preface

This publication provides information about installing and configuring IBM®
Tivoli® Storage Manager for z/OS® Media.

Who should read this guide

This publication is intended for a system administrator installing and configuring
Tivoli Storage Manager for z/OS Media Version 6.3.

Publications

Publications for the IBM Tivoli Storage Manager family of products are available
online. The IBM 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 all publications, go to the Tivoli Storage Manager information center at
http://publib.boulder.ibm.com/infocenter/tsminfo/v6r3.

You can download PDF versions of publications from the Tivoli Storage Manager
information center or from the IBM Publications Center at http://www.ibm.com/
shop/publications/order/.

Go to Tivoli Documentation Central to find information centers that contain official
product documentation for current and previous versions of Tivoli products,
including the Tivoli Storage Manager product family. You can find Tivoli
Documentation Central at https://www.ibm.com/developerworks/wikis/display/
tivolidoccentral/Home.

You can also order some related publications from the IBM Publications Center
website. The website provides information about ordering publications from
countries other than the United States. In the United States, you can order
publications by calling 1-800-879-2755.

Tivoli Storage Manager publications

The following tables list the publications that make up the Tivoli Storage Manager
library.

Table 1. Tivoli Storage Manager server publications

Publication title	Order number
IBM Tivoli Storage Manager for AIX® Installation Guide	GC23-9781
IBM Tivoli Storage Manager for AIX Administrator's Guide	SC23-9769
IBM Tivoli Storage Manager for AIX Administrator's Reference	SC23-9775
IBM Tivoli Storage Manager for HP-UX Installation Guide	GC23-9782
IBM Tivoli Storage Manager for HP-UX Administrator's Guide	SC23-9770
IBM Tivoli Storage Manager for HP-UX Administrator's Reference	SC23-9776
IBM Tivoli Storage Manager for Linux Installation Guide	GC23-9783

Table 1. Tivoli Storage Manager server publications (continued)

Publication title	Order number
IBM Tivoli Storage Manager for Linux Administrator's Guide	SC23-9771
IBM Tivoli Storage Manager for Linux Administrator's Reference	SC23-9777
IBM Tivoli Storage Manager for Oracle Solaris Installation Guide	GC23-9784
IBM Tivoli Storage Manager for Oracle Solaris Administrator's Guide	SC23-9772
IBM Tivoli Storage Manager for Oracle Solaris Administrator's Reference	SC23-9778
IBM Tivoli Storage Manager for Windows Installation Guide	GC23-9785
IBM Tivoli Storage Manager for Windows Administrator's Guide	SC23-9773
IBM Tivoli Storage Manager for Windows Administrator's Reference	SC23-9779
IBM Tivoli Storage Manager for z/OS Media Installation and User's Guide	SC27-4018
IBM Tivoli Storage Manager Upgrade and Migration Guide for V5 Servers	GC27-4017
IBM Tivoli Storage Manager Integration Guide for Tivoli Storage Manager FastBack®	SC27-2828

Table 2. Tivoli Storage Manager storage agent publications

Publication title	Order number
IBM Tivoli Storage Manager for SAN for AIX Storage Agent User's Guide	SC23-9797
IBM Tivoli Storage Manager for SAN for HP-UX Storage Agent User's Guide	SC23-9798
IBM Tivoli Storage Manager for SAN for Linux Storage Agent User's Guide	SC23-9799
IBM Tivoli Storage Manager for SAN for Oracle Solaris Storage Agent User's Guide	SC23-9800
IBM Tivoli Storage Manager for SAN for Windows Storage Agent User's Guide	SC23-9553

Table 3. Tivoli Storage Manager client publications

Publication title	Order number
IBM Tivoli Storage Manager for UNIX and Linux: Backup-Archive Clients Installation and User's Guide	SC23-9791
IBM Tivoli Storage Manager for Windows: Backup-Archive Clients Installation and User's Guide	SC23-9792
IBM Tivoli Storage Manager Using the Application Programming Interface	SC23-9793
IBM Tivoli Storage Manager for Space Management for UNIX and Linux: User's Guide	SC23-9794
IBM Tivoli Storage Manager HSM for Windows Administration Guide	SC23-9795

Table 4. Tivoli Storage Manager data protection publications

Publication title	Order number
IBM Tivoli Storage Manager for Databases: Data Protection for Microsoft SQL Server Installation and User's Guide	GC27-4010

Table 4. Tivoli Storage Manager data protection publications (continued)

Publication title	Order number
IBM Tivoli Storage Manager for Databases: Data Protection for Oracle for UNIX and Linux Installation and User's Guide	SC27-4019
IBM Tivoli Storage Manager for Databases: Data Protection for Oracle for Windows Installation and User's Guide	SC27-4020
IBM Tivoli Storage Manager for Mail: Data Protection for Microsoft Exchange Server Installation and User's Guide	GC27-4009
IBM Tivoli Storage Manager for Mail: Data Protection for Lotus Domino® UNIX and Linux Installation and User's Guide	SC27-4021
IBM Tivoli Storage Manager for Mail: Data Protection for Lotus Domino for Windows Installation and User's Guide	SC27-4022
IBM Tivoli Storage Manager for Enterprise Resource Planning: Data Protection for SAP Installation and User's Guide for DB2	SC33-6341
IBM Tivoli Storage Manager for Enterprise Resource Planning: Data Protection for SAP Installation and User's Guide for Oracle	SC33-6340
IBM Tivoli Storage Manager for Virtual Environments Installation and User's Guide	SC27-2898
IBM Tivoli Storage Manager for Microsoft SharePoint Guide	N/A

Table 5. IBM Tivoli Storage Manager troubleshooting and tuning publications

Publication title	Order number
IBM Tivoli Storage Manager Problem Determination Guide	GC23-9789
IBM Tivoli Storage Manager Performance Tuning Guide	GC23-9788
IBM Tivoli Storage Manager Client Messages and Application Programming Interface Return Codes	SC27-2878
IBM Tivoli Storage Manager Server Messages and Error Codes	SC27-2877
IBM Tivoli Storage Manager for Mail: Data Protection for Microsoft Exchange Server Messages	GC27-4011
IBM Tivoli Storage Manager for Databases: Data Protection for Microsoft SQL Server Messages	GC27-4012
IBM Tivoli Storage Manager for Databases: Data Protection for Oracle Messages	SC27-4014
IBM Tivoli Storage Manager for Mail: Data Protection for Lotus Domino Messages	SC27-4015
IBM Tivoli Storage Manager for Enterprise Resource Planning: Data Protection for SAP Messages	SC27-4016

Note: You can find information about IBM System Storage® Archive Manager at http://publib.boulder.ibm.com/infocenter/tsminfo/v6r3/ c_complydataretention_ovr.html.

Support information

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

Start at the IBM Support Portal: 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.

Getting technical training

Information about Tivoli technical training courses is available online.

Go to the following websites to sign up for training, ask questions, and interact with others who use IBM storage products.

Tivoli software training and certification
Choose from instructor led, online classroom training, self-paced Web classes, Tivoli certification preparation, and other training options at http://www.ibm.com/software/tivoli/education/

Tivoli Support Technical Exchange
Technical experts share their knowledge and answer your questions in webcasts at http://www.ibm.com/software/sysmgmt/products/support/supp_tech_exch.html.

Storage Management community
Interact with others who use IBM storage management products at http://www.ibm.com/developerworks/servicemanagement/sm/index.html

Global Tivoli User Community
Share information and learn from other Tivoli users throughout the world at http://www.tivoli-ug.org/.

IBM Education Assistant
View short "how to" recordings designed to help you use IBM software products more effectively at http://publib.boulder.ibm.com/infocenter/ieduasst/tivv1r0/index.jsp

Searching knowledge bases

If you have a problem with your Tivoli Storage Manager family product, there are several knowledge bases that you can search.

Begin by searching the Tivoli Storage Manager Information Center at http://publib.boulder.ibm.com/infocenter/tsminfo/v6r3. From this website, you can search the current Tivoli Storage Manager documentation.

Searching the Internet
If you cannot find an answer to your question in the IBM Tivoli Storage Manager information center, search the Internet for the information that might help you resolve your 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 including:
- IBM technotes
- IBM downloads
- IBM Redbooks® publications
- IBM Authorized Program Analysis Reports (APARs)

Select the product and click **Downloads** to search the APAR list.

If you still cannot find a solution to the problem, you can search forums and newsgroups on the Internet for the latest information that might help you find problem resolution.

An independent user discussion list, ADSM-L, is hosted by Marist College. You can subscribe by sending 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*.

To share your experiences and learn from others in the Tivoli Storage Manager and Tivoli Storage FlashCopy Manager user communities, go to the following wikis:

Tivoli Storage Manager wiki
> http://www.ibm.com/developerworks/wikis/display/ tivolistoragemanager

Tivoli Storage FlashCopy Manager wiki
> https://www.ibm.com/developerworks/mydeveloperworks/wikis/home/ wiki/Tivoli Storage FlashCopy Manager

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.

To learn about which products are supported, go to the IBM Support Assistant download web page at http://www.ibm.com/software/support/isa/ download.html.

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 at the IBM Support Assistant website:

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 your problem might be available from the IBM software support website.

You can 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 your product, or a component for which you want to find a fix.
    2. Click **Downloads**, and then click **Fixes by version**.
- If you have not customized the site based on your product usage, click **Downloads** and search for your product.

Receiving notification of product fixes

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

To sign up to receive notifications about IBM products, follow these steps:

1. From the support page at http://www.ibm.com/support/entry/portal/, click **Sign in to create, manage, or view your subscriptions** in the **Notifications** pane.
2. 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.
3. Click **Manage all my subscriptions** in the **Notifications** pane.
4. Click the **Subscribe** tab and then click **Tivoli**.
5. Select the products for which you want to receive notifications and click **Continue**.
6. 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.

To obtain help from IBM Software Support, complete the following steps:

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

Setting up a subscription and support contract

Set up a subscription and support contract. The type of contract that you need depends on the type of product you have.

For IBM distributed software products (including, but not limited to, IBM Tivoli, Lotus®, and Rational® products, as well as IBM DB2® and IBM WebSphere® products that run on Microsoft Windows or on operating systems such as AIX or Linux), 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:** 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 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). Sign in to access IBM Service Requests and
enter your information into the problem submission tool.

By telephone

For the telephone number to call in your country, go to the IBM Software
Support Handbook at http://www14.software.ibm.com/webapp/set2/sas/
f/handbook/home.html and click **Contacts**.

Chapter 1. Tivoli Storage Manager for z/OS Media overview

IBM Tivoli Storage Manager for z/OS Media V6.3 and IBM Tivoli Storage Manager for z/OS Media Extended Edition V6.3 are designed to enable IBM Tivoli Storage Manager V6.3 servers running on AIX and Linux on System z to access a variety of FICON attached tape or DASD resources on z/OS.

IBM Tivoli Storage Manager for z/OS Media V6.3 and IBM Tivoli Storage Manager for z/OS Media Extended Edition V6.3 are replacement products for Tivoli Storage Manager V5.5 and Tivoli Storage Manager Extended Edition for z/OS V5.5. If you currently have Tivoli Storage Manager for z/OS V5.5 or Tivoli Storage Manager Extended Edition for z/OS V5.5 installed, you can move to a Tivoli Storage Manager V6.3 server on AIX or Linux on System z to take advantage of new functions available in Tivoli Storage Manager V6, while maintaining the ability to access FICON attached storage on a z/OS system. With Tivoli Storage Manager for z/OS Media the tape volumes and stored data that was previously inventoried by the Tivoli Storage Manager for z/OS V5.5 server remain available to the Tivoli Storage Manager V6.3 server on AIX or Linux for System z. Volumes in the z/OS managed tape library do not have to be moved.

Tivoli Storage Manager for z/OS Media V6.3 and Tivoli Storage Manager for z/OS Media Extended Edition V6.3 working in collaboration with a Tivoli Storage Manager V6.3 server on AIX or Linux for System z can also provide access to data stored on z/OS by exploiting Tivoli Storage Manager storage agent technology. This enables the client to transfer data directly to and from the z/OS media server using a TCP/IP network. This setup requires IBM Tivoli Storage Manager for Storage Area Networks.

For more information, see the following publications:
- *Tivoli Storage Manager Administrator's Guide*
- *Tivoli Storage Manager for SAN Storage Agent User's Guide*

Chapter 2. Tivoli Storage Manager for z/OS Media installation steps

This section describes the steps that will be used to install Tivoli Storage Manager for z/OS Media.

You will install Tivoli Storage Manager for z/OS Media using SMP/E. Once installed you will configure the Tivoli Storage Manager for z/OS Media options file.

1. You will install Tivoli Storage Manager for z/OS Media using SMP/E. Instructions for installing with SMP/E are found in the *Tivoli Storage Manager for z/OS Media Program Directory* which, when available, can be downloaded from the Publications Center at: http://www.ibm.com/shop/publications/order/. Search on the Program Directory publication number, GI13-2202.

2. Configure the Tivoli Storage Manager for z/OS Media options file.

   a. Copy (e.g. via ISPF) the SAMPLIB member ANZOPTIN to the ANZSERV.OPTIONS data set that was allocated by job ANZALLOC in Step 5.

   b. Edit this data set by changing the following values in the options file:

      • Change the TCPADDR option to the IP address of the machine running Tivoli Storage Manager for z/OS Media.

      • Optionally you can change the value for TCPPORT to the port number the Tivoli Storage Manager for z/OS Media uses or leave the default value 1555.

      • You must supply a valid phrase for the PASSPHRASE option.

      • You must activate a LICENSE option.

      See "Modifying the Tivoli Storage Manager for z/OS Media options" on page 5 for more information on changing Tivoli Storage Manager for z/OS Media options.

3. Edit the JCL that will be used to start Tivoli Storage Manager for z/OS Media. The following is a sample of the JCL:

```
//SERVER   EXEC PGM=ANZSRVR,REGION=0M
//STEPLIB  DD DSN=IBM.HANZ630.LOAD,DISP=SHR
//*SYSPRINT  DD SYSOUT=*
//SYSTERM   DD SYSOUT=*
//TSMMSGS   DD SYSOUT=*
//TSMTRACE  DD SYSOUT=*
//CEEDUMP   DD SYSOUT=*
//TSMOPTS   DD DSN=IBM.HANZ630.OPTIONS,DISP=SHR
```

   Make the following edits to the start JCL if they are applicable to your environment:

   a. Copy the ANZPROC member from SAMPLIB to an appropriate proclib if desired.

   b. Add job card information.

   c. If the SMP/E target LOADLIB will be copied to the MVS linklist, the STEPLIB DD statement can remain as a comment. Unless the SMP/E target LOADLIB will be copied to a linklisted library, uncomment the STEPLIB DD and change the DSN value to the name of your SMP/E target LOADLIB (hlq.IBM.SANZLNKE). As an alternative you could also copy the target

LOADLIB to another library and specify that name. IMPORTANT NOTE: This LOADLIB must be APF authorized.

d. Change the DSN for TSMOPTS to the name of the ANZSERV.OPTIONS data set previously edited.

4. Run the ANZPROC JCL to start Tivoli Storage Manager for z/OS Media. You can run this job as either a batch job or a started task.

Chapter 3. Configuring the Tivoli Storage Manager for z/OS Media options file

This section describes each of the options that are in the Tivoli Storage Manager for z/OS Media options file. In addition this section describes how to change the options file using either a text editor before the product is active or the **SETOPT** command after the product is active.

Modifying the Tivoli Storage Manager for z/OS Media options

You can modify each of the options in the Tivoli Storage Manager for z/OS Media options file using any text editor. For example, the ISPF text editor.

The sample Tivoli Storage Manager for z/OS Media options file supplied in the SAMPLIB member ANZOPTIN contains the following options with their default values:

```
DYNALLOCOFFLN      N
*LICENSE           BASICEDITION
*LICENSE           EXTENDEDEDITION
MESSAGEFORMAT      1
MSGSUPPRESS        0
OAMCALL            N
PASSPHRASE  zosmediaserverpw
ROUTECODE          2
TCPADDR     127.0.0.1
TCPPORT         1555
MOUNTMSG           Y
*TAPEDELEXIT exitname
```

Note:

- You must change the value of the TCPADDR option to the home address that Tivoli Storage Manager for z/OS Media will use to listen for incoming connections.
- You must supply a valid phrase for the PASSPHRASE option, replacing the value *zosmediaserverpw*.
- An asterisk (*) preceding an option (for example *TAPEDELEXIT and *LICENSE) indicates that the option is included in the options file only as a comment. To activate the option, remove the asterisk and supply a value.

To modify the options:

1. Open the options file using a text editor.
2. You must activate a LICENSE option in the Tivoli Storage Manager for z/OS Media options file. This LICENSE option is used to specify whether Tivoli Storage Manager for z/OS Media is licensed for basic or extended functionality. If the LICENSE option is not specified in the options file, Tivoli Storage Manager for z/OS Media will not initialize. You will activate BASICEDITION for this option if the Tivoli Storage Manager V6.3 server instance that is connecting to Tivoli Storage Manager for z/OS Media has a basic edition license or EXTENDEDEDITION if the instance has an extended edition license. To activate the correct LICENSE option, remove the preceding asterisk. See "LICENSE option" on page 7 for more information.

3. You must change the value for TCPADDR to the home address that Tivoli Storage Manager for z/OS Media will use to listen for incoming connections. You can specify a generic or specific address. See "TCPADDR option" on page 11 for more information.

4. You may change the TCPPORT number if it conflicts with another port number on the same system, or if it is invalid on that system. The value that is specified in the LLA operand of the DEFINE SERVER command issued on the Tivoli Storage Manager server to define its connection to the z/OS media server server must be the same as the value specified in the TCPPORT option.

5. You must change the default phrase in the PASSPHRASE option to the phrase that will be used by Tivoli Storage Manager for z/OS Media and Tivoli Storage Manager to authenticate mutual access. This phrase can be up to 16 characters. The value for this option must be the same phrase that was specified for the SERVERPASSWORD parameter in the Tivoli Storage Manager DEFINE SERVER command that was used to identify the location of the z/OS media server to the Tivoli Storage Manager server. The value you specify for **serverpassword** is not case sensitive. An example of the command is as follows:

```
define server <64 byte server name> serverpassword=<zosmediaserverpw>
     hla=<server IP> lla=<port number>
```

6. Optionally you can change any of the other parameters in the options file. The additional options that you can choose to change are:
   • "DYNALLOCOFFLN option"
   • "MESSAGEFORMAT option" on page 8
   • "OAMCALL option" on page 9
   • "ROUTECODE option" on page 10
   • "MOUNTMSG option" on page 8
   • "TAPEDELEXIT option" on page 10

7. Upon completing the edit of the options file, you can start Tivoli Storage Manager for z/OS Media.

DYNALLOCOFFLN option

The DYNALLOCOFFLN option allows Tivoli Storage Manager for z/OS Media to select an offline device if no other devices are available.

Syntax

```
DYNALLOCOFFLN value
```

Parameters

value   Specifies whether Tivoli Storage Manager for z/OS Media can select an offline device if no other devices are available. The possible values are:

    Y   Specify Y to allow Tivoli Storage Manager for z/OS Media to select an offline device if no other devices are available.

    N   Specify N to prohibit Tivoli Storage Manager for z/OS Media from selecting an offline device if no other devices are available. The default value is N.

Example

The following is an example of setting the DYNALLOCOFFLN option to Y using a text editor:

```
DYNALLOCOFFLN Y
```

The following is an example of setting the DYNALLOCOFFLN option to Y from the operator console:

```
F taskname,SETOPT DYNALLOCOFFLN Y
```

LICENSE option

The LICENSE option specifies the type of license that will be used when connecting to Tivoli Storage Manager for z/OS Media.

You must specify a LICENSE option in the Tivoli Storage Manager for z/OS Media options file. This LICENSE option is used to specify whether Tivoli Storage Manager for z/OS Media is licensed for basic edition or extended edition functionality. If the LICENSE option is not specified in the options file, Tivoli Storage Manager for z/OS Media will not initialize. There is no default value specified for this option in the options file.

If you are unsure as to what type of license to specify, check the deliverable associated with your Tivoli Storage Manager 6.3 server. If your Tivoli Storage Manager 6.3 server was acquired using PID 5698-Z01 then your Tivoli Storage Manager 6.3 server and Tivoli Storage Manager for z/OS Media are both licensed for basic edition functionality. If your Tivoli Storage Manager 6.3 server was acquired using PID 5698-Z02 then Tivoli Storage Manager for z/OS Media requires the Extended Edition license.

Syntax

```
LICENSE licensetype
```

Parameters

licensetype

Specifies the type of license that will be used when connecting to Tivoli Storage Manager for z/OS Media. The possible values are:

BASICEDITION

You will specify BASICEDITION for this option if the Tivoli Storage Manager 6.3 server instance that is connecting to Tivoli Storage Manager for z/OS Media has a basic edition license. To activate this option, remove the asterisk that precedes the option in the supplied options file.

EXTENDEDEDITION

You will specify EXTENDEDEDITION for this option if the Tivoli Storage Manager 6.3 server instance that is connecting to Tivoli Storage Manager for z/OS Media has an extended edition license. To activate this option, remove the asterisk that precedes the option in the supplied options file.

Example

```
LICENSE BASICEDITION
LICENSE EXTENDEDEDITION
```

MESSAGEFORMAT option

The MESSAGEFORMAT option specifies how message numbers are displayed in multi-line messages.

Syntax

MESSAGEFORMAT *number*

Parameters

number

Specifies whether a message number is displayed only on the first line of a multi-line message or is displayed on all lines. Specify a one to display the message number only in the first line of the message. This is the default. Specify a two to display the message number in all lines of a message.

Example

MESSAGEFORMAT 2

MOUNTMSG option

The MOUNTMSG option specifies whether a mount or dismount message will be issued for every file that is mounted or dismounted.

Syntax

MOUNTMSG *value*

Parameters

value   Specifies whether a mount or dismount message will be issued for every file that is mounted or dismounted by Tivoli Storage Manager for z/OS Media. Specify a Y to display the mount or dismount message. Specify an N to not display the mount and dismount messages. The value Y is the default. The mount messages issued are ANZ5206I and ANZ5410I. The dismount messages issued are ANZ5208I and ANZ55209I.

Example

MOUNTMSG Y

MSGSUPPRESS option

The MSGSUPPRESS option specifies the level of messages to be suppressed.

Suppression does not affect response to console commands or the content of the activity log. You cannot suppress error (E) or severe error (S) messages.

Syntax

MSGSUPPRESS *number*

Parameters

number

Specifies the levels of messages to be suppressed. A value of zero displays all messages. This is the default. Specify a one to suppress all information messages or a two to suppress all information (I) and warning (W) messages.

Example

```
MSGSUPPRESS 2
```

OAMCALL option

The OAMCALL option specifies whether Tivoli Storage Manager for z/OS Media allocation should access the OAM database to determine if a required tape is in the automated tape library.

Syntax

```
 OAMCALL  value
```

Parameters

value   Specifies whether Tivoli Storage Manager for z/OS Media allocation should access the OAM database to determine if a required tape is in the automated tape library. The possible options are:

     Y   Specifies that during allocation Tivoli Storage Manager for z/OS Media will access the OAM database to determine if a required tape is in the automated tape library.

     N   Specifies that during allocation Tivoli Storage Manager for z/OS Media will not access the OAM database to determine if a required tape is in the automated tape library.

Example

```
OAMCALL N
```

PASSPHRASE option

The PASSPHRASE option specifies a phrase that is used by Tivoli Storage Manager for z/OS Media to authenticate access from a Tivoli Storage Manager server or storage agent to the z/OS media server. The PASSPHRASE option is also used by the Tivoli Storage Manager server to validate the identity of the z/OS media server.

Once access is validated by Tivoli Storage Manager for z/OS Media and Tivoli Storage Manager, each request is passed over a validated communication channel and additional authentication is not required. There is no default value for this option in the Tivoli Storage Manager for z/OS Media options file. It is required and you must open the options file and specify the character value for the PASSPHRASE option before starting Tivoli Storage Manager for z/OS Media.

Syntax

```
PASSPHRASE zosmediaserverpw
```

Parameters

zosmediaserverpw

     Specifies the phrase that is used by Tivoli Storage Manager for z/OS Media and Tivoli Storage Manager to authenticate mutual access. This phrase can be up to 16 characters. In this option, you must specify the same phrase that was specified for the SERVERPASSWORD parameter in the Tivoli Storage Manager DEFINE command that was used to identify the location of the z/OS media server to the Tivoli Storage Manager server. The value you specify for **serverpassword** is not case sensitive. An example of the command is as follows:

```
define server <64 byte server name> serverpassword=<zosmediaserverpw>
             hla=<server IP> lla=<port number>
```

Example

`PASSPHRASE zosmediaserverpw`

ROUTECODE option

The ROUTECODE option specifies the routing code for Tivoli Storage Manager for z/OS Media messages. Tivoli Storage Manager for z/OS Media uses the WTO facility for routing server messages.

Syntax

ROUTECODE *number*

Parameters

number
> Select a number to identify the routing code to be used. The minimum value is one; the maximum value is twelve. The default value is two which is designated as the tape console. For details about these codes, see the appropriate routing and descriptor codes documentation.

Example

`ROUTECODE 2`

TAPEDELEXIT option

The TAPEDELEXIT option specifies the name of the exit program that is called when a tape volume is deleted from the Tivoli Storage Manager for z/OS Media pool of managed tape volumes.

Syntax

`TAPEDELEXIT exitname`

Parameters

exitname
> Specifies an eight character Tape Deletion Exit name. If specified, the Tape Deletion Exit is called when a tape volume is deleted from the Tivoli Storage Manager for z/OS Media pool of managed volumes. Typically this option is used to issue RMM CA1 scratch commands if required. There is no default for this option and it appears in the options file as a comment. To activate the option, remove the asterisk and supply a value.

Example

`TAPEDELEXIT exitname`

TCPADDR option

The TCPADDR option specifies the home IP address that Tivoli Storage Manager for z/OS Media uses to listen for incoming connections.

The value that you specify for the TCPADDR option can either be a specific or a generic address. Specifying the generic value of 0.0.0.0 allows incoming connections from any configured IP home address. Specifying an exact address allows incoming connections only from that IP address.

Syntax

```
TCPADDR  ipaddress
```

Parameters

ipaddress

Specifies the home IP address that Tivoli Storage Manager for z/OS Media uses to listen for incoming connections. The *ipaddress* may be specified as a generic (0.0.0.) or specific address.

Example 1

If the z/OS media server TCPADDR option is a specific address, for example:

```
TCPADDR  192.168.1.20
```

Then z/OS media server will accept inbound connections only for addresses in the range 192.168.1.xxx if the subnet mask is 255.255.255.0.

In the case where the z/OS mainframe is multi-homed and communicates on 2 networks - for example home address 1 - 192.168.1.20 and home address 2 - 10.1.1.10 and the z/OS media server administrator codes the TCPADDR option as 192.168.1.20, then z/OS media server will only accept connections from that network.

Example 2

If as in example 1 the z/OS mainframe is multi-homed and communicates on 2 networks - for example home address 1 - 192.168.1.20 and home address 2 - 10.1.1.10 and the Tivoli Storage Manager for z/OS Media TCPADDR option is specified as:

```
TCPADDR  0.0.0.0
```

Then z/OS media server will accept inbound connections from any configured IP home address.

TCPPORT option

The TCPPORT option specifies the port number that Tivoli Storage Manager for z/OS Media uses to listen for incoming connections.

This is an optional parameter. The default value is 1555.

Syntax

```
TCPADDR  portnumber
```

Parameters

portnumber

Specifies the port number that Tivoli Storage Manager for z/OS Media uses to listen for incoming connections. The value that is specified in the LLA operand of the DEFINE SERVER command issued on the Tivoli Storage Manager server to define its connection to the z/OS media server must be the same as the value specified in the TCPPORT option.

Example

```
TCPORT 1555
```

Using the SETOPT command

You can use the SETOPT command to set the DYNALLOCOFFLN option in the Tivoli Storage Manager for z/OS Media options file after Tivoli Storage Manager for z/OS Media is started.

To set the DYNALLOCOFFLN option using the SETOPT command:

1. Activate Tivoli Storage Manager for z/OS Media.
2. Issue the SETOPT command from the z/OS operator console. The only option that you can reset after Tivoli Storage Manager for z/OS Media is active is the DYNALLOCOFFLN option. An example of the command is as follows:

```
F taskname,SETOPT DYNALLOCOFFLN Y
```

Appendix A. Using the TRACE command

The TRACE command can be used to provide additional information to the Tivoli Storage Manager for z/OS Media support team for debugging purposes.

There are many different TRACE options that can be requested by the Tivoli Storage Manager for z/OS Media support team, each of which provides specific information. Turning on one or more of the tracing options can affect performance, so use tracing only at the request of the support team, to help in debugging a problem.

Although the available TRACE options can be used to trace individual modules and data areas, the traces most requested by the support team are composite requests which set multiple traces. For example, the FLOW option traces the entry to and the exit from major functions. The SUB option traces the entry to and the exit from minor functions.

Some trace requests can cause a lot of output to be generated. For example, *ALL* turns on all tracing, except for a few large data area displays. Ouput is directed to a file as specified by the user in the JCL for the Tivoli Storage Manager for z/OS Media task.

You can set up tracing to occur as a single instance or to continue over a longer term. To set up as a single occurrence, use the F operator command. For example, to turn tracing on, issue the following command:

`F taskname,TRACE,ON,trace1[,trace2[,trace3,...]]`

To turn tracing off issue the following command:

`F taskname,TRACE,OFF,trace1[,trace2[,trace3,...]]`

For long term traces, the command can be placed in the options file. For example:

`TRACE ON,trace1[,trace2[,trace3,...]]`

Where:

- *taskname* is the name of the Tivoli Storage Manager for z/OS Media started task.
- *trace1*, *trace2*, *trace3* specify the trace options that you want to activate. The options are listed in Table 6.

Table 6. Trace option table

TRACE option	Description of information
TR_BD_FLOW	Block Disk Flow
TR_BLKDISK	Block Disk General
TR_CART	Cartridge Information
TR_CARTDATA	Cartridge Information
TR_CARTEOV	Cartridge Information
TR_CARTINFO	Cartridge Information
TR_CARTIO_FLOW	NTP CART Entry/Exit
TR_CMD	Operator Commands
TR_CMD_FLOW	Operator Commands

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Table 6. Trace option table (continued)

TRACE option	Description of information
TR_COND	General Condition
TR_COND_FLOW	Condition Entry/Exit trace
TR_DDNBLK	DDname Block Hex Print
TR_DRV	DRV General Trace
TR_DRV_FLOW	DRV Entry/Exit
TR_DRVVOL	DRV Volume Function trace
TR_ENTPIO_FLOW	eNTP Entry/Exit
TR_FLAT	VSAM Flat File Trace
TR_FLATBATCH	BDBatch CI Read/Write (high output)
TR_FLATIO_FLOW	NTP VSAM Flat File Entry/Exit
TR_INIT	Initialization
TR_INIT_FLOW	Initialization Flow
TR_INSTR	Instrumentation Sample (calls
TR_INT	Interface
TR_INT_FLOW	Interface Flow
TR_IO	General I/O
TR_IO_FLOW	IO Entry/Exit
TR_IP	General IP
TR_IP_FLOW	General IP Entry/Exit
TR_MEM	General Memory
TR_MEM_FLOW	Memory Entry/Exit trace
TR_MEMALLOC	Memory allocation/deallocation
TR_MMGBLK	mmgr data area
TR_MUTEX	General Mutex
TR_MUTEX_FLOW	Mutex Entry/Exit trace
TR_NTPIO	NTP IO General Trace
TR_NTPIO_FLOW	NTP Entry/Exit
TR_OPER	Operator Commands - Volume Delete
TR_OPTS	Options General
TR_OPTS_FLOW	Options Flow
TR_PK	PK General Trace
TR_PK_FLOW	PK Entry/Exit
TR_POS_FLOW	Position Flow
TR_TCPDATA	TCP/IP
TR_TCPINFO	TCP/IP
TR_TCPSODEBUG	TCP/IP
TR_TCPTRAP	TCP/IP
TR_THREAD	General Threading
TR_THREAD_FLOW	Thread Entry/Exit trace

Examples

The TR_ before each trace name is optional. For example to turn on the first three traces:

```
F taskname,TRACE,ON,BD_FLOW,BLKDISK,CART
F taskname,TRACE,ON,TR_BD_FLOW,TR_BLKDISK,TR_CART
```

Traces are additive, so that entering a TRACE ON with a specific option command does not affect any other traces that are already active. Similarly, turning a trace off, turns off only that trace. To turn all traces off, use the *ALL* option. For example:

```
TRACE OFF.*ALL*
```

Appendix B. ANZ: Tivoli Storage Manager for z/OS Media messages

This section documents the messages and error codes issued by Tivoli Storage Manager for z/OS Media.

Messages are presented in ascending numerical and alphabetical order. Each message generated by Tivoli Storage Manager for z/OS Media has a severity code printed as the last character of the message ID. The severity codes are described in Table 7.

Table 7. Error message severity codes

Severity Code	Description
I	Information message. No user action required.
W	Warning message. Processing can continue but results might not be as expected.
E	Error message. Processing cannot continue. Some errors might be user-correctable; read the User Response to determine the course of action.
S	Severe Error message. Processing cannot continue. Some errors might be user-correctable; read the User Response to determine the course of action.

ANZ0001E   Unknown message ID *messageid***.**

Explanation: There is no message in the message table that corresponds to the message ID requested.

System action: None, processing continues.

User response: Contact your service representative.

ANZ0002I   Tivoli Storage Manager server is starting.

Explanation: The server task is initializing.

System action: Processing continues.

User response: This is an informational message, no user response is required.

ANZ0003I   Tivoli Storage Manager Server is terminating.

Explanation: The server task is stopping.

System action: None.

User response: This is an informational message, no action by the user is required.

ANZ0004E   Tivoli Storage Manager server is terminating due to error, rc=*xxx***.**

Explanation: The server encountered an unexpected

error and was unable to continue.

System action: The server terminates.

User response: Contact your service representative.

ANZ0005E   Unknown or unsupported device type *devicetype***.**

Explanation: The server has received a request for a device type that is invalid or unsupported.

System action: Processing continues.

User response: Contact your service representative.

ANZ0006E   Unknown or unsupported driver verb *driververb***.**

Explanation: The server received a driver verb that is invalid or unsupported.

System action: The current command is ignored, processing continues.

User response: Contact your service representative.

ANZ0007E   Unknown or unsupported operator command *verb***.**

Explanation: The server received an operator command that is invalid or unsupported.

System action: The current command is ignored, processing continues.

User response: Correct the command or input a valid command.

ANZ0008I   **Operator command:** *operatorcommand***.**

Explanation: The server has received an operator command.

System action: The current command is processed.

User response: No user action is required.

ANZ0009I   **Operator command output:** *output***.**

Explanation: This is the output from an operator command.

System action: No action is required, processing continues.

User response: No user response is required.

ANZ0132E   **Memory allocation failed: object** *objectname***, size** *size***.**

Explanation: The server cannot obtain enough memory to create the object.

System action: The activity that generated this error fails.

User response: Allocate additional storage to the server. For details, issue **HELP MEMORY** to display the information online or see *Appendix A. Allocating Additional Server Memory*.

ANZ0900I   **Processing options file** *filename***.**

Explanation: At initialization, the server is reading the server options file whose name is shown in the message.

System action: The server reads and processes the options in this file.

User response: None.

ANZ0902I   **Option file:** *filename* **failed to open for** *reason***, error number is** *(errornumber)***.**

Explanation: The options file failed to open.

System action: Server initialization is halted.

User response: Check that the options file is present in the server JCL, and that it is defined as a sequential file. The options file cannot be a PDS or PDSE. Check also that the DCB settings are correct.

ANZ0903E   **Option file** *filename* **is defined as a PDS/PDSE.**

Explanation: The options file is defined as a PDS or PDSE. This is an invalid definition.

System action: Server initialization is halted.

User response: Recreate the options file as a sequential file.

ANZ0905E   *messagetext*

Explanation: This is a diagnostic message from the TRACE command.

System action: Depends on the message contents.

User response: Correct the TRACE command options.

ANZ0906E   **Blank value invalid for option** *optionname***.**

Explanation: No value was supplied for the specified option.

System action: Processing continues.

User response: Either remove the option or specify a correct value.

ANZ0907I   **Option** *optionname* **set to** *value***.**

Explanation: Message specifies the value of the option as it exists in the options file.

System action: No action is required, processing continues.

User response: No user action required.

ANZ0908E   **Unknown option:** *optionname***.**

Explanation: The option name specified was unknown or unsupported.

System action: Server initialization continues.

User response: Correct or remove the option name. Refer to "Modifying the Tivoli Storage Manager for z/OS Media options" on page 5 for a full list of supported options.

ANZ0909E   **Invalid value:** *value* **for option:** *optionname***.**

Explanation: The value specified for the option was invalid.

System action: Server initialization continues.

User response: Correct or remove the option value. Refer to the "Modifying the Tivoli Storage Manager for z/OS Media options" on page 5 for a full list of supported options and valid values.

ANZ0910I   **Loaded Tape Deletion Exit:** *exitname* **at** *exitlocation***.**

Explanation: The specified tape deletion exit was loaded successfully.

System action: Processing continues.

User response: None

ANZ0911E   **Tape deletion exit:** *exitname* **failed to load.**

Explanation: The specified tape deletion exit was not loaded.

System action: Processing continues without the exit.

User response: Ensure that the tape deletion exit name is correct, and that it is available in a STEPLIB, JOBLIB or LINKLIST library.

ANZ0912E   **An invalid value for the LICENSE option was specified.**

Explanation: An invalid or unknown value for the LICENSE option was specified in the options file.

System action: The server initialization is halted.

User response: Specify a valid value in the options file for the LICENSE keyword. Valid options are BASICEDITION or EXTENDEDEDITION.

ANZ0913E   **A value for the LICENSE option was not specified.**

Explanation: A value for the LICENSE option was not specified in the options file.

System action: The server initialization is halted.

User response: Specify a valid value in the options file for the LICENSE keyword. Valid options are BASICEDITION or EXTENDEDEDITION.

ANZ0950I   **Register succeeded for PID:** *arg1***,** *arg2***.**

Explanation: The product was registered with Product Management.

System action: Processing continues.

User response: None.

ANZ0951E   **Register failed for PID:** *arg1***,** *arg2* **, Return code =** *rc*

Explanation: An error occurred attempting to register the product with Product Management.

System action: Processing continues.

User response: Review the return code reason in the relevant section of the *MVS Programming: Product Registration* publication. If this does not help to resolve

the problem, contact your service representative.

ANZ0952I   **Deregister succeeded for PID:** *arg1***,** *arg2***.**

Explanation: The product was deregistered from Product Management.

System action: Processing continues.

User response: None.

ANZ0953E   **Deregister failed for PID:** *arg1***,** *arg2***, Return code =** *rc***.**

Explanation: An error occurred attempting to deregister the product from Product Management.

System action: Processing continues.

User response: Review the return code reason in the relevant section of the *MVS Programming: Product Registration* publication. If this does not help to resolve the problem, contact your service representative.

ANZ0954W   **License mismatch: IBM Tivoli Storage Manager =** *tsmserver***, z/OS media server =** *zosmediaserver*

Explanation: There is a mismatch in the license type set for the IBM Tivoli Storage Manager 6.3 server and the z/OS media server.

System action: Processing continues.

User response: Check the license type that you have specified for the z/OS media server. It should match the license type that was specified for IBM Tivoli Storage Manager.

ANZ0993I   **Server initialization is complete.**

Explanation: The server has been restarted after a halt or system failure. It is now ready to resume normal operation.

System action: Server completes initialization.

User response: None.

ANZ5026E   **An attempt to open data set** *datasetname* **failed, return code** *returncode***, reason code** *reasoncode***.**

Explanation: The data set was not opened. The return code and reason code provide information about the problem.

System action: Server operation continues.

User response: Verify that the data set name is a VSAM linear data set. If the data set name is a valid VSAM linear data set and if the return code and the reason code do not provide enough information about the solution, contact your service representative.

ANZ5028E **An attempt to open data set** *datasetname* **failed; the data set contains zero pages.**

Explanation: The VSAM linear data set has no space. This message appears in the following cases:

- The def vol|dbvol|logvol command was issued for a volume that has not been formatted using the DSMFMT utility.
- The DSMFMT utility was run against a data set that is too small.
- An existing data set has been corrupted.

System action: Server operation continues.

User response: Run the DSMFMT utility or reallocate the VSAM linear data set as appropriate.

ANZ5030E **Dynamic allocation of data set** *datasetname* **failed, return code** *returncode*, **error code** *errorcode*, **information code** *informationcode*.

Explanation: The dynamic allocation of the data set failed. The return code is displayed in decimal, while the information and error codes are displayed in hexadecimal. Additional information on the return, error, and information codes can be found in the Dynamic Allocation section of the *MVS/ESA Programming: Authorized Assembler Services Guide*.

System action: Server operation continues.

User response: Ensure that the data set is available for allocation by the server.

ANZ5031I **Dynalloc message:** *message text*.

Explanation: This message contains additional information about the dynamic allocation or deallocation error.

System action: Server operation continues, the allocation or deallocation fails.

User response: Take any action required to correct the problem.

ANZ5032E **Unable to free data set** *datasetname*, **return code** *returncode*, **error code** *errorcode*, **information code** *informationcode*.

Explanation: The dynamic deallocation of the data set failed. The return code is displayed in decimal, while the information and error codes are displayed in hexadecimal. Additional information on the return, error, and information codes can be found in the Dynamic Allocation section of the *MVS/ESA Programming: Authorized Assembler Services Guide*.

System action: Server operation continues.

User response: If the return code, reason code, and information code do not provide clues to the solution, contact your service representative.

ANZ5033E **An attempt to close data set** *datasetname* **failed, return code** *returncode*, **reason code** *reason code*.

Explanation: The data set was not closed. The return code and reason code can provide information about the problem.

System action: The server operation continues.

User response: Verify that the data set is a valid VSAM linear data set. If the data set is a valid VSAM data set and the return code and reason code do not provide enough information to find a solution, contact your service representative.

ANZ5035E **Dynamic allocation of tape unit** *tapeunitname* **failed, return code** *returncode*, **error code** *errorcode*, **information code** *informationcode*, **sms code** *smscode*, **s99ercf code** *s99ercf* , **and s99erco code** *s99erco*.

Explanation: The dynamic allocation of a tape unit failed. The return code is displayed in decimal, while the information, error, sms, s99ercf, and s99erco codes are displayed in hexadecimal. Additional information on the return, error, information, sms, s99ercf, and s99erco codes can be found in the Dynamic Allocation section of the *MVS/ESA Programming: Authorized Assembler Services Guide*.

System action: Server operation continues.

User response: Examine the MVS messages preceding this message. They should explain the cause of the allocation problem; otherwise, contact your service representative.

ANZ5036E **An attempt to open tape unit** *tapeunitname* **(data set** *datasetname***) failed; return code** *returncode*.

Explanation: The data set was not opened. The return code and other messages can provide clues to the problem.

System action: Server operation continues.

User response: Examine the MVS messages preceding this message. The ANZ1401W message and the volume name will explain the problem. If necessary, contact your service representative.

ANZ5038E **Volume** *volumename* **cannot be processed at this version of the operating system.**

Explanation: The volume was created on a version of the operating system that had BSAM Large Block support. The current version of the operating system cannot process the volume.

System action: Server operation continues.

User response: Mark storage pool volumes as unavailable until the operating system is upgraded to OS/390 R10 or higher. Do not use database backup or database dump volumes until the system is upgraded.

ANZ5039W **Volume** *volumename* **is currently allocated to another user.**

Explanation: This volume is currently mounted to another task. It is possible that the task lost communication with its Tivoli Storage Manager client.

System action: The server operation continues.

User response: Wait for either the task that currently owns the volume to end or for the waiting task to time out. If the volume owning the task lost communications it will detect this and release the volume.

ANZ5045E **An attempt to open data set** *datasetname* **failed. Error detected with the VSAM high-used (***vsamhighusedvalue***) or high-allocated (***vsamhighallocatedvalue***) values.**

Explanation: The server did not open the data set. The VSAM high-used and high-allocated attributes are outside of the range expected by the server. The values might have been corrupted by moving the data set using an operation other than a logical move.

System action: The volume is marked as read-only, or the volume is not brought online. The server operation continues.

User response: Issue `listcat entry (datasetname) all` to check the high-used and high-allocated values. If you moved the data set, verify that a logical move was performed.

ANZ5046I **Dynamic allocation of tape unit** *unitname* **was cancelled by the operator.**

Explanation: The dynamic allocation of a tape unit was cancelled.

System action: The server operation continues. The tape mount fails.

User response: None.

ANZ5048E **Tape data set allocation of block size changed from** *servervalue* **to** *currentvalue***.**

Explanation: The server allocated the block size of its tape data set as *servervalue*, but it has been changed to *currentvalue*.

System action: Current tape operation fails.

User response: Check for MVS or system application messages preceding this message that indicate what caused the change to the block size. Check for any

system exits that might change the block size (for example, IEFDB401). Ensure that the server can use its original value for the block size.

ANZ5049E **Tape data set allocation of data set organization changed from a hexadecimal value** *servervalue* **to a hexadecimal value** *currentvalue***.**

Explanation: The server allocated the data set organization of its tape data set as *servervalue*, but it has been changed to *currentvalue* in the data control block (DCB).

System action: Current tape operation fails.

User response: Check for MVS or system application messages preceding this message that indicate what caused the change to the data set organization. Check for any system exits that may change the data set organization (for example, IEFDB401). Ensure that the server can use its original value for the data set organization. See *MVS/DFP V3R3 Macro Instructions for Data Sets* for valid values.

ANZ5050E **Tape data set allocation of record format changed from hexadecimal value** *servervalue* **to hexadecimal value** *currentvalue***.**

Explanation: The server allocated the record format of its tape data set as *servervalue* but it has been changed to *currentvalue* in the data control block (DCB).

System action: Current tape operation fails.

User response: Check for MVS or system application messages preceding this message that indicate what caused the change to the record format. Check for any system exits that might change the record format (for example, IEFDB401). Ensure that the server can use its original value for the record format. See *MVS/DFP V3R3 Macro Instructions for Data Sets* for valid values.

ANZ5051E **Tape data set allocation of logical record length changed from** *servervalue* **to** *currentvalue***.**

Explanation: The server allocated the logical record length of its tape data set as *servervalue*, but it has been changed to *currentvalue*.

System action: Current tape operation fails.

User response: Check for MVS or system application messages preceding this message that indicate what caused the change to the logical record length. Check for any system exits that might change the logical record length (for example, IEFDB401). Ensure that the server can use its original value for the logical record length.

ANZ5206I Mounting *type* **volume** *volser***.**

Explanation: The volume *volser* is mounted and ready to be used by the server.

System action: Server operation continues.

User response: None.

ANZ5208I **Dismounting volume** *volser number* **bytes written.**

Explanation: The volume *volser* is dismounted after being updated by the server. Possible reasons for the dismount include:

*   The volume was dismounted after a backup or archive operation completed.
*   The volume was found idle and the drive was needed for another volume.
*   The volume is dismounted as a result of the DISMOUNT VOLUME command.
*   The volume is dismounted because of a previously reported error condition.

System action: Server operation continues.

User response: None.

ANZ5209I **Dismounting read only volume** *volser number* **bytes written.**

Explanation: The volume *volser* is dismounted after read-only access by the server. Possible reasons for the dismount include:

*   The volume was dismounted after a restore or retrieve operation completed.
*   The volume was found idle and the drive was needed for another volume.
*   The volume is dismounted as a result of the DISMOUNT VOLUME command.
*   The volume is dismounted because of a previously reported error condition.

System action: Server operation continues.

User response: None.

ANZ5217I **Dismounting volume** *volser* **- retention minute mount retention expired.**

Explanation: The volume *volser* is dismounted because the MOUNTRETENTION value *retention* specified for this device class has elapsed without activity on this volume.

System action: Server operation continues.

User response: None.

ANZ5218I **Dismounting volume** *volser* **containing data set** *dsname* **after unexpected open error.**

Explanation: The volume *volser* containing data set *dsname* is dismounted because an unexpected open error occurred.

System action: Server operation continues.

User response: Look for other error messages which may indicate what caused the open error.

ANZ5224E **Deletion exit for** *volser* **(storage pool** *pool***) failed. ExitRc =** *rc***; Rc =** *abend indicated*

Explanation: The deletion of volume *volser* in the storage pool *pool* fails.

System action: Server operation continues.

User response: If the exit return code *rc* is nonzero, check the documentation for the tape deletion exit specified in the server options file. If the tape deletion exit has abended, the indicator *abend indicated* is nonzero.

ANZ5225I **FILE** *filename* **has been deleted.**

Explanation: The FILE volume *filename* was deleted.

System action: The server operation continues.

User response: None.

ANZ5226I **Delete failed for FILE** *filename***; return code** *rc***.**

Explanation: The FILE volume *filename* could not be removed. The reason the delete failed is indicated in the *rc*.

System action: The server operation continues.

User response: Look for other error messages which may indicate what caused the error when trying to delete the volume.

ANZ5229W **RACROUTE delete failed for** *volser***, SAF return code** *System authorized facility return code***, return code** *RACF return code***, reason code** *RACF reason code***.**

Explanation: The deletion of the profile for volume *volser* failed. The return codes and reason code are the result of a RACROUTE call. The codes are in hexadecimal. The SAF return code is designated as *x0yy* where *yy* is the SAF return code and *x* indicates the call as follows:

*   1 specifies RACROUTE REQUEST=DEFINE, TYPE=DELETE, CLASS='TAPEVOL', ENTITY=volume

- 2 specifies RACROUTE REQUEST=STAT, CLASS='TAPEVOL', ENTITY=volume
- 3 specifies RACROUTE REQUEST=DEFINE, TYPE=DELETE, CLASS='DATASET', VOLSER=volume, ENTITY=tape dataset name

The failure of the profile deletion is not an error if the volume did not have a profile. No profile will exist for a volume if the server was not set up to request a profile by setting the PROTECTION parameter in the DEFINE DEVCLASS command to NO when the volume was first used, or if the server never used the volume.

System action: Server operation continues.

User response: If the RACF profile exists for the volume, check the system log for error messages to find the cause of the problem. The profile for the volume specified in the message will have to be deleted by issuing the appropriate RACF commands. For information on the return codes and reason code, see *External Security Interface (RACROUTE) Macro Reference for MVS*.

ANZ5321I   End of volume reached for *volumeid* **on device** *realaddress***.**

Explanation: During processing of a read/write tape volume, the end of the tape volume has been reached.

System action: The volume is marked read-only and kept mounted for later use.

User response: None.

ANZ5323I   Assigning volume *volumeid* **to SCRTCH.**

Explanation: The server has assigned the mounted volume to be used as the requested scratch volume.

System action: The server dynamically adds the volume label of the mounted volume to the storage pool.

User response: None.

ANZ5324I   Assigning volume to EXPORT.

Explanation: The server has assigned the mounted volume to be used as the requested export volume.

System action: The server uses the volume for the EXPORT operation.

User response: None.

ANZ5325I   Assigning volume *volumeid* **to IMPORT.**

Explanation: The server has assigned the mounted volume to be used as the requested import volume.

System action: The server uses the volume for the IMPORT operation.

User response: None.

ANZ5326I   Volume label on *realaddr* **(***volumeidfound***) does not match** *volumeidexpected***.**

Explanation: During mount processing, the volume ID that the server reads on the mounted volume does not match the specifically requested, partially full volume.

System action: The server dismounts the volume, detaches the device, and requests the original volume again.

User response: Make sure you are mounting the correct volume.

ANZ5329I   Assigning volume *volumeid* **to DUMPDB.**

Explanation: The server assigns the mounted volume for use as the requested DUMPDB operation.

System action: The server uses the volume for the DUMPDB operation.

User response: None.

ANZ5330I   Assigning volume *volumeid* **to LOADDB.**

Explanation: The server assigns the mounted volume for use as the requested LOADDB volume.

System action: The server uses the volume for the LOADDB operation.

User response: None.

ANZ5331S   Volume *volumeid* **is damaged. Recovery is required.**

Explanation: The server detects an error on the specified volume. The volume has been unexpectedly or incorrectly repositioned during write processing. Data might have been lost.

System action: The server halts the process that is using the volume and marks the volume as read-only.

User response: For EXPORT, DBBACKUP, or DBDUMP tapes, restart the export, backup, or dump operation. Do not use the tape for an IMPORT, DSMSERV RESTORE DB, or DSMSERV LOADDB operation. If the tape is a storage pool volume, you can attempt to recover the data with the following steps:

1. To identify any missing data, issue the AUDIT VOLUME command by specifying FIX=NO.
2. If recoverable data exists on the tape, delete references to the missing data from the database by issuing the AUDIT VOLUME command and specifying FIX=YES.
3. Issue the MOVE DATA command to remove all data from the damaged tape after the AUDIT (FIX=YES) has completed.

Note: Issuing an AUDIT command on a damaged volume can result in a large number of logged messages.

ANZ5333I   Assigning volume *volumeid* **to DBBKUP.**

Explanation: The server assigns the mounted volume for use as the requested DBBKUP volume.

System action: The server uses the volume for the DBBKUP operation.

User response: None.

ANZ5334W   Volume *volumeid* **reached end of tape.**

Explanation: The server has detected the end of the tape for the specified volume. The volume reached the end of the tape before the maximum capacity value specified in the device class was reached.

System action: The server requests another volume if one is available. The current process stops writing to the specified volume.

User response: Reduce the maximum capacity in the device class. The QUERY VOLUME command will indicate the actual capacity of the volume after it is full. Use the UPDATE DEVCLASS command to change the maximum capacity for the device class.

ANZ5336E   Volume *volumeid* **must be read-only on a 3590 device.**

Explanation: The server requests a volume in a mode other than read-only. The 3590 device that is used to satisfy the mount cannot be used to write to the volume.

System action: The server cancels the current operation.

User response: Update the volume access to READONLY or mount the volume with the appropriate device.

ANZ5337I   Assigning volume *volumeid* **to backup set.**

Explanation: The server has assigned the mounted volume to be used as the requested backup set volume.

System action: The server uses the volume for the backup set operation.

User response: None.

ANZ5338E   DEVCLASS *deviceclass* **mounted device** *realaddress* **cannot write to a volume.**

Explanation: The server requested a volume with a specific format. The device cannot write to the volume using the requested format.

System action: The server dismounts the volume,

detaches the device, and requests the original volume again.

User response: Check the UNIT parameter in the DEFINE DEVCLASS command and ensure that the device can write with the defined format type.

ANZ5339E   DEVCLASS *devclass* **mounted device** *realaddress* **cannot read from a volume.**

Explanation: The server requested a volume with a specific format. The device cannot read from the volume using the requested format.

System action: The server dismounts the volume, detaches the device, and requests the original volume again.

User response: Check the UNIT parameter in the DEFINE DEVCLASS command and ensure that the device can read from volumes with the defined format type.

ANZ5351E   Error reading BlockID on device *realaddress*.

Explanation: A READ BLOCK ID CCW failed.

System action: The server marks the volume in an I/O error condition and requests another volume be mounted.

User response: This failure might be due to a hardware problem. Reset the error condition with the UPDATE VOLUME command. If the problem persists, use the DELETE VOLUME command with DISCARD=NO to remove the volume from the storage pool.

ANZ5352E   Synchronize failed on device *realaddress*.

Explanation: A Synchronize CCW failed.

System action: The server marks the volume in an I/O error condition, and requests another volume be mounted.

User response: Reply to the new mount request. Reset the error condition with the UPDATE VOLUME command. The original volume might be corrupted. To delete the volume, issue the DELETE VOLUME command with DISCARD=NO to remove the volume from the storage pool.

ANZ5354E   Block *blocknumber* **sequence error on device** *realaddress*.

Explanation: During a read operation, the block ID of the block being read does not match the block ID stored in the data block header.

System action: The server places the volume in an I/O error state.

User response: The integrity of the volume might

ANZ5455E *devicetype* **volume** *volumename* **cannot be overwritten by BACKUP DB operation.**

Explanation: The specified volume already exists or contains data. The server does not allow new backup data to be written to the volume.

System action: The server detects that the given volume already contains some data that would be overwritten by the requested backup operation.

User response: If the specified volume does not contain any valuable data, delete it and retry the backup operation.

ANZ5456E *devicetype* **volume** *volumename* **cannot be overwritten by backup set operation.**

Explanation: The specified volume already exists or contains data. The server does not allow new backup set data to be written to the volume.

System action: The server detects that the given volume already contains some data that would be overwritten by the requested backup set operation.

User response: If the specified volume does not contain any valuable data, delete it and retry the backup set operation.

ANZ5510E **Data set name** *datasetname* **is not valid, a server tape operation failed.**

Explanation: Data set name is not valid.

System action: The server operation continues. The current operation can fail.

User response: Check for other messages. Ensure that the PREFIX value in the DEFINE DEVCLASS command is valid.

ANZ5511E **Unit name** *unitname* **is not valid, a server tape operation failed.**

Explanation: The name of the unit that was specified in not valid.

System action: The server operation continues. The current operation can fail.

User response: Check for other messages. Ensure that the UNIT value in the DEFINE DEVCLASS command is valid.

ANZ5512E **Volume serial** *volumeserial* **is not valid, a server tape operation failed.**

Explanation: Volume serial number is not valid.

System action: The server operation continues. The current operation can fail.

User response: Check for other messages. If you defined a volume manually, or entered a command

with a volume name, ensure the name is valid.

ANZ5513E **Expiration date** *date* **is not valid, a server tape operation failed.**

Explanation: The tape expiration date is not valid.

System action: The server operation continues. The current operation might fail.

User response: Check for other messages. Ensure that the EXPIRATION value in the DEFINE DEVCLASS command is valid.

ANZ5514E **Retention period** *retentionperiod* **is not valid, a server tape operation failed.**

Explanation: The tape retention period is not valid.

System action: The server operation continues. The current operation might fail.

User response: Check for other messages. Ensure that the RETENTION value in the DEFINE DEVCLASS command is valid.

ANZ5959E **IBM Tivoli Storage Manager is not running as APF authorized. Return Code =** *rc***. Tivoli Storage Manager and all JOBLIB or STEPLIB libraries (C library, etc.) must be authorized.**

Explanation: One or more of the JOBLIB or STEPLIB libraries is not APF authorized. A return code was returned from TESTAUTH.

System action: The server is unable to continue and terminates.

User response: Ensure that all JOBLIB and STEPLIB libraries are APF authorized before continuing.

ANZ5964E **IBM Tivoli Storage Manager is unable to mark itself non-swappable. Return code =** *returncode* **from SYSEVENT TRANSWAP.**

Explanation: The server attempted to set itself as non-swappable, but was unable to do so due to the *return code* from the call to SYSEVENT TRANSWAP.

System action: The server is unable to continue and terminates.

User response: Investigate the cause of the return code from SYSEVENT TRANSWAP.

ANZ7800I **DSMSERV generated at** *time* **on** *date***.**

Explanation: The server module was generated on the indicated date and time.

System action: The server operation continues.

User response: None.

ANZ7801I **Subsystem (master) PID is** *processidentifier***.**

Explanation: The server kernel extension process has the indicated process identifier.

System action: The server operation continues.

User response: None.

ANZ7833S **The process** *threadid* **terminated in response to a program abort.**

Explanation: The thread has ended due to a program abort.

System action: The server completes termination processing.

User response: None.

ANZ7834I **The thread** *threadid* **terminated in response to an external signal.**

Explanation: The thread has ended due to an external signal.

System action: The server completes termination processing.

User response: None.

ANZ7835I **The server thread** *threadid* **terminated in response to a server shutdown.**

Explanation: The thread has ended due to a server shutdown.

System action: The server completes termination processing.

User response: None.

ANZ8678E **Error number** *errornumber***, writing to a FILE volume** *volumename***, writing** *byteswritten* **of** *bytesattempted* **attempted bytes.**

Explanation: The server was not able to complete a write operation to a FILE volume. Out of space conditions might cause this problem.

System action: The server fails the current operation.

User response: Check the job log for associated product or system messages. Correct any problems. If the problem persists, contact product support.

ANZ8679E **Error number** *errornumber***, closing a FILE volume** *volumename***.**

Explanation: The server received an error during a close operation on a FILE volume. This might be the result of a previous error.

System action: The server continues.

User response: Check the job log for associated product or system messages. Correct any problems. If the problem persists, contact technical support.

ANZ9997S **Internal error** *error* **detected.**

Explanation: The server task is terminating due to an error.

System action: The server task terminates.

User response: None.

ANZ9998S **Server operation terminated.**

Explanation: The server task is terminating due to an error.

System action: The server task terminates.

User response: None.

ARY9999I *msgtext*

Explanation: This is a diagnostic message.

System action: The system action depends on the contents of the message.

User response: None.

Appendix C. 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 following list includes the major accessibility features in the Tivoli Storage Manager family of products:
- Keyboard-only operation
- Interfaces that are commonly used by screen readers
- Keys that are discernible by touch but do not activate just by touching them
- Industry-standard devices for ports and connectors
- The attachment of alternative input and output devices

The Tivoli Storage Manager Information Center, and its related publications, are accessibility-enabled. The accessibility features of the information center are described at http://publib.boulder.ibm.com/infocenter/tsminfo/v6r3/topic/com.ibm.help.ic.doc/iehs36_accessibility.html.

Keyboard navigation

On Windows, the Tivoli Storage Manager product family follows Microsoft conventions for all keyboard navigation and access. Drag and Drop support is managed using the Microsoft Windows Accessibility option known as MouseKeys. For more information about MouseKeys and other Windows accessibility options, please refer to the Windows online help (keyword: MouseKeys).

On other operating systems, these products follow the operating-system conventions for keyboard navigation and access.

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 for more information about the commitment that IBM has to accessibility.

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Glossary

A glossary is available with terms and definitions for the IBM Tivoli Storage Manager server and related products.

The glossary is located in the Tivoli Storage Manager information center: http://publib.boulder.ibm.com/infocenter/tsminfo/v6r3

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