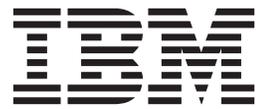


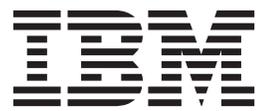
IBM InfoSphere Guardium S-TAP for VSAM on z/OS V8.2
Version 8 Release 2

User's Guide



IBM InfoSphere Guardium S-TAP for VSAM on z/OS V8.2
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Note:

Before using this information and the product it supports, read the information in "Notices" on page 27.

This edition applies to Version 8 Release 2 of IBM InfoSphere Guardium S-TAP (product number 5655-STV) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this information

This document contains information about IBM® InfoSphere Guardium S-TAP for VSAM on z/OS®. Its purpose is to provide an overview of IBM InfoSphere Guardium S-TAP for VSAM on z/OS and its functions, as well as tasks for installing, configuring, and using IBM InfoSphere Guardium S-TAP for VSAM on z/OS. This book includes:

- Steps for installing and configuring IBM InfoSphere Guardium S-TAP for VSAM on z/OS
- System requirements and prerequisites
- Processes for the effective use of IBM InfoSphere Guardium S-TAP for VSAM on z/OS

This book is designed to help database administrators, system programmers, and application programmers perform these tasks:

- Plan for the installation of IBM InfoSphere Guardium S-TAP for VSAM on z/OS
- Install and operate IBM InfoSphere Guardium S-TAP for VSAM on z/OS
- Configure the IBM InfoSphere Guardium S-TAP for VSAM on z/OS
- Diagnose and recover from IBM InfoSphere Guardium S-TAP for VSAM on z/OS problems

Specific changes since the previous edition of this book are indicated by a vertical bar (|) to the left of a change. Editorial changes that have no technical significance are not noted.

Always check the publications web page for the most current version of this publication:

<http://www-01.ibm.com/software/data/guardium/library.html>

Who should read this book

This book is intended for those persons responsible for installing, customizing, and using IBM InfoSphere Guardium S-TAP for VSAM on z/OS.

Service updates and support information

To find service updates and support information, including software fix packs, PTFs, Frequently Asked Question (FAQs), technical notes, troubleshooting information, and downloads, refer to the following Web page:

http://www-947.ibm.com/support/entry/portal/Overview/Software/Information_Management/InfoSphere_Guardium

Highlighting conventions

This information uses the following highlighting conventions:

- **Boldface** type indicates commands or user interface controls such as names of fields, folders, icons, or menu choices.
- Monospace type indicates examples of text that you enter exactly as shown.

- *Italic* type indicates variables that you should replace with a value, to indicate the titles of other publication, and to emphasize significant terms.

How to read syntax diagrams

The following rules apply to the syntax diagrams that are used in this information:

- Read the syntax diagrams from left to right, from top to bottom, following the path of the line. The following conventions are used:
 - The >>--- symbol indicates the beginning of a syntax diagram.
 - The ---> symbol indicates that the syntax diagram is continued on the next line.
 - The >--- symbol indicates that a syntax diagram is continued from the previous line.
 - The --->< symbol indicates the end of a syntax diagram.
- Required items appear on the horizontal line (the main path).



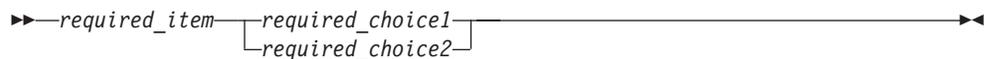
- Optional items appear below the main path.



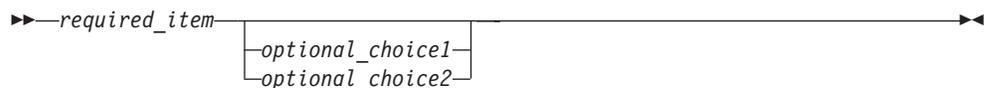
If an optional item appears above the main path, that item has no effect on the execution of the syntax element and is used only for readability.



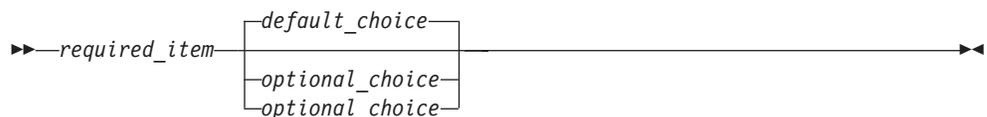
- If you can choose from two or more items, they appear vertically, in a stack. If you *must* choose one of the items, one item of the stack appears on the main path.



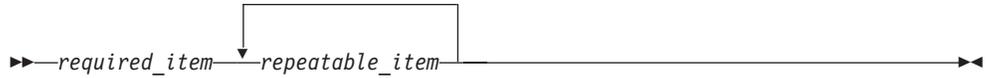
If choosing one of the items is optional, the entire stack appears below the main path.



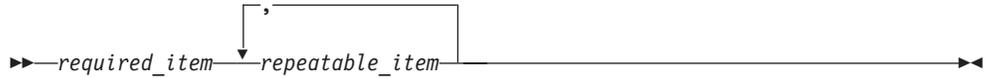
If one of the items is the default, it appears above the main path, and the remaining choices are shown below.



- An arrow returning to the left, above the main line, indicates an item that can be repeated.



If the repeat arrow contains a comma, you must separate repeated items with a comma.



A repeat arrow above a stack indicates that you can repeat the items in the stack.

- Keywords, and their minimum abbreviations if applicable, appear in uppercase. They must be spelled exactly as shown. Variables appear in all lowercase italic letters (for example, *column-name*). They represent user-supplied names or values.
- Separate keywords and parameters by at least one space if no intervening punctuation is shown in the diagram.
- Enter punctuation marks, parentheses, arithmetic operators, and other symbols, exactly as shown in the diagram.
- Footnotes are shown by a number in parentheses, for example (1).

How to look up message explanations

You can use any of the following methods to search for messages and codes:

Searching an information center

In the search box that is located in the top left toolbar of any Eclipse help system, such as the IBM Information Management Software for z/OS Solutions Information Center, enter the number of the message that you want to locate. For example, you can enter DFS1065A in the search field.

Use the following tips to help you improve your message searches:

- You can search for information on codes by entering the code; for example, enter -327.
- Enter the complete or partial message number. You can use wild cards (* or ?) in the message number to broaden your search; for example, DFS20??I.

The information center contains the latest message information for all of the information management products that are included in the information center.

Using a Web search

You can use any of the popular search engines that are available on the Web to search for message explanations. When you type the specific message number or code into the search engine, you will be presented with links to the message information in IBM information centers.

Using LookAt

LookAt is an online facility that you can use to look up explanations for most of the IBM messages you encounter, as well as for some system abends and codes. Using LookAt to find information is faster than a conventional search because in most cases LookAt goes directly to the message explanation.

You can use LookAt from the following locations to find IBM message explanations for z/OS elements and features, z/VM[®], VSE/ESA, and Clusters for AIX[®] and Linux:

- The Internet. You can access IBM message explanations directly from the LookAt Web site at <http://www.ibm.com/eserver/zseries/zos/bkserv/lookat/>.
- Your z/OS TSO/E host system. You can install code on your z/OS or z/OSe systems to access IBM message explanations, using LookAt from a TSO/E command line (for example, TSO/E prompt, ISPF, or z/OS UNIX System Services running OMVS).
- Your Microsoft Windows workstation. You can install code to access IBM message explanations on the z/OS Collection (SK3T-4269) using LookAt from a Microsoft Windows command prompt (also known as the DOS command line).
- Your wireless handheld device. You can use the LookAt Mobile Edition with a handheld device that has wireless access and an Internet browser (for example, Internet Explorer for Pocket PCs, Blazer, or Eudora for Palm OS, or Opera for Linux handheld devices). Link to the LookAt Mobile Edition from the LookAt Web site.

You can obtain code to install LookAt on your host system or Microsoft Windows workstation from a disk on your z/OS Collection (SK3T-4269) or from the LookAt Web site (click **Download**, and select the platform, release, collection, and location that suit your needs). More information is available in the LOOKAT.ME files available during the download process.

How to send your comments

Your feedback is important in helping to provide the most accurate and high-quality information. If you have any comments about this book or any other IBM InfoSphere Guardium S-TAP for VSAM on z/OS documentation:

- Use the online reader comment form, which is located at:
www.ibm.com/software/data/rcf/
- Send your comments by e-mail to comments@us.ibm.com. Be sure to include the name of the book, the part number of the book, the version of IBM InfoSphere Guardium S-TAP for VSAM on z/OS, and, if applicable, the specific location of the text you are commenting on (for example, a page number or table number).

Chapter 1. Welcome to IBM InfoSphere Guardium S-TAP for VSAM on z/OS

IBM InfoSphere Guardium S-TAP for VSAM on z/OS(also referred to as InfoSphere Guardium S-TAP) is a tool that collects and correlates data access information from System Management Facility (SMF) records to produce a comprehensive view of business activity for auditors.

InfoSphere Guardium S-TAP provides the following features and functions:

- Data collection— InfoSphere Guardium S-TAP can collect and correlate many different types of information:
 - Access to VSAM data sets and security violations as recorded by SMF.
 - Data set operations performed against VSAM data sets such as deletes or renames as recorded by SMF.

InfoSphere Guardium S-TAP for VSAM components

InfoSphere Guardium S-TAP consists of 3 main components: a server, an agent, and the Guardium Appliance.

Server

The InfoSphere Guardium S-TAP server provides communications between the Guardium interface and other components of the product.

The server filters data collected by the agent analyzes and aggregates the information, and communicates with the Guardium appliance.

Agent

The IBM InfoSphere Guardium S-TAP for VSAM agent is responsible for the collection of VSAM-related information as obtained from the SMF record exit interface.

An IBM InfoSphere Guardium S-TAP for VSAM agent collects data from a single z/OS system. Data is collected directly from SMF records as presented to various SMF exits with which the agent interfaces.

A z/OS started task is executed for the data collection. Sample JCL for the started task can be found in member AUVJSTC in the SAMPLIB.

Note: IBM InfoSphere Guardium S-TAP for VSAM on z/OS only reports audited events for SMF record types that are collected by SMF. If specific SMF record types are not collected by your system, the event cannot be reported. Please refer to SMF record types topic within the Reference Information section for a list of SMF record types used by IBM InfoSphere Guardium S-TAP for VSAM.

Uses for IBM InfoSphere Guardium S-TAP for VSAM on z/OS

IBM InfoSphere Guardium S-TAP for VSAM on z/OS provides a comprehensive view of business activity occurring against VSAM data sets.

IBM InfoSphere Guardium S-TAP for VSAM on z/OS assists auditors in determining who read or updated a particular VSAM cluster and its associated data sets, and when the access took place.

Prerequisites

The following sections describe hardware and software prerequisites for IBM InfoSphere Guardium S-TAP for VSAM on z/OS V8.2.

Hardware and software requirements

InfoSphere® Guardium® S-TAP® for VSAM requires z/OS Version 1 Release 11 or higher.

User ID authorities required for installation

This topic describes z/OS USERID authorities needed to install the IBM InfoSphere Guardium S-TAP for VSAM on z/OS V8.2 product.

The z/OS USERID of the installer of this product must have authority to:

- Define the appropriate SMF record collection parameters in the SMFPRMxx PARMLIB member and APF authorize the load library for the product.
- Update the appropriate procedure library to include the server's started task.

Chapter 2. Configuring InfoSphere Guardium S-TAP for VSAM

This section describes the steps required to configure InfoSphere Guardium S-TAP for VSAM.

Synopsis

- The Security section describes the resource authorizations required by the product.
- The Pre-configuration tasks section describes planning steps and required information.
- The Configure the started task JCL section describes the steps necessary to modify the sample started task JCL for your environment.
- The Allocate the control data set section describes how to allocate and initially populate the control data set.
- The Specify the subsystem options section describes changes you can make to the options member in the control data set.
- The Start the server section describes how to initiate the server started task.
- The SAMPLIB member listing can be found in the Configuration Appendix section of this User's Guide.

Security

InfoSphere Guardium S-TAP for VSAM requires access to various z/OS data sets and system components in order to perform its function. This section lists the security considerations and requirements for proper functioning of the product.

APF authorization

InfoSphere Guardium S-TAP for VSAM requires certain data sets be accessible and APF authorized on the system in which the started task server will run and SMF data will be collected by the agent.

About this task

- The product data set SAUVLOAD, which contains the product's load modules required for operation, must be APF authorized on the system on which InfoSphere Guardium S-TAP for VSAM will be executed.

Refer to *z/OS V1R8.0 MVS System Commands* for more information on how to APF authorize libraries.

The control data set

InfoSphere Guardium S-TAP for VSAM uses a control data set as defined in the server started task. The z/OS started task must be authorized to read and update this data set.

Pre-configuration tasks

The tasks in this section are required prior to configuring InfoSphere Guardium S-TAP.

Use the Planning list to determine necessary information before configuring. Then provide a valid job card, as described in the following sections.

Planning

Before configuring InfoSphere Guardium S-TAP for VSAM , the administrator must determine the following:

- The user that will configure the product
- The user ID that will be used to run the z/OS started task
- Where the server and the agent will run

Job cards for the sample JCL in the SAMPLIB

Some JCL members shipped with the product SAMPLIB have a sample card for the job card.

A valid job card conforming to your site's JCL standards must be provided before submitting any of the JCL.

Configure SMFPRMxx PARMLIB member

An authorized user must configure the active SMFPRMxx member of the z/OS system PARMLIB to collect the required SMF record types needed by InfoSphere Guardium S-TAP for VSAM.

The record types may be collected at the SUBSYS or SYS level. Maximum auditing of VSAM data set activity can be achieved by ensuring that all defined subsystems record all of the SMF record types required by the product.

The defaults used at the system level for those subsystems not explicitly defined should also specify collection of the required SMF record types. The required SMF record types are 30, 42, 60, 61, 62, 64, 65, 66, 80 and 89.

In addition, the IEFU83, IEFU84 and IEFU85 SMF exits should be specified at either the SYS or SUBSYS level in a manner consistent with the SMF record type specifications.

Allocate the control data set

The options and definitions that determine how InfoSphere Guardium S-TAP for VSAM performs processing in your environment reside in the control data set. The JCL to create the control data set is located in the AUVJCNTL member of the SAUVSAMP library.

About this task

To allocate the control data set and generate the initial PDS members, complete these steps:

Procedure

1. Configure the AUVJCNTL member by replacing AUV.V8R2 with the high-level qualifier of the installed InfoSphere Guardium S-TAP for VSAM load library.

Note: The high-level qualifier that you specify must match the high-level qualifier you specified in when configuring the started task JCL.

2. Submit the JCL to create the control data set. The JCL creates the control data set and populates the data set with these initial members: subsystem options (OPTIONS) and policy rule definition members (RULEDEFS and RULEDEFB).

Important:

- You must not modify the contents of the RULEDEFS or RULEDEFB member.
- You should not modify the value of the default INITIAL_RULEDEF option.
- You must specify the TCP/IP_ADDRESS, AGENT_NAME, and PORT parameters for the product to function properly.

Specify subsystem options

This section describes the requirements for specifying subsystem options.

To configure InfoSphere Guardium S-TAP for VSAM, you must specify a four-character InfoSphere Guardium S-TAP for VSAM subsystem ID (for example: AUV1) to associate with this particular instance of InfoSphere Guardium S-TAP for VSAM. The InfoSphere Guardium S-TAP for VSAM SSID identifies the InfoSphere Guardium S-TAP for VSAM subsystem in messages generated by the product.

The InfoSphere Guardium S-TAP for VSAM subsystem options reside in the OPTIONS member of the InfoSphere Guardium S-TAP for VSAM control data set generated by the AUVJCNTL member JCL. These options are the global definitions and general operation options that determine where and how InfoSphere Guardium S-TAP for VSAM performs its functions.

To specify InfoSphere Guardium S-TAP for VSAM subsystem options, modify the contents of the OPTIONS member as described in the definition list of system options and descriptions.

SSID Specify the four-character alphanumeric InfoSphere Guardium S-TAP for VSAM subsystem ID that identifies this particular instance of InfoSphere Guardium S-TAP for VSAM. For example, "AUV1", "AUV2" and so on. The default subsystem ID is "AUV1".

INITIAL_RULEDEF

Specify the name of the rule definitions member to use upon startup. The default rule definitions member name is RULEDEFS. You must not change this subsystem option unless directed to do so by IBM Technical Support.

TCP/IP_ADDRESS

Specify the TCP/IP address for the Guardium appliance with which InfoSphere Guardium S-TAP for VSAM is to communicate.

The address can be specified as a host name (*infosphere.guardiumvsam.net*) or as four numeric digits separated by periods (e.g., 188.128.6.42).

Maximum length is 57 characters. There is no default.

PORT

Specify a numeric value that defines the TCP/IP port number for communication with the Guardium appliance by InfoSphere Guardium S-TAP for VSAM.

Valid values are 0-99999. There is no default.

PING_RATE

Specify a numeric value that defines the number of seconds between pings to the Guardium appliance. The ping functions as a “heartbeat” to the Guardium appliance to signal that InfoSphere Guardium S-TAP for VSAM is active and available for communications.

Valid values are 0-65535. The default value is 5.

RETRY_INTERVAL

Specify a numeric value that defines the number of seconds between retries when an error is encountered while sending data to the Guardium appliance.

Valid values are 0-65535. The default value is 10.

RETRY_COUNT

Specify a numeric value that defines the number of times to retry communicating with the Guardium appliance when an error is encountered. If the communication is still not successful after the number of retries as specified by this value have been completed, the communication is abandoned and the data is not sent. The process also terminates if the number of retries specified is reached with no successful reconnect.

Valid values are 0-65535. The default value is 20.

SOCKET_TIMEOUT

Specify a numeric value that defines the number of seconds that must transpire before a timeout condition is recognized.

Valid values are 0-65535. The default value is 20.

AGENT_NAME

Specify a character string from one through 26 characters that defines the name of this InfoSphere Guardium S-TAP for VSAM agent.

There is no default.

Configure the started task JCL

The InfoSphere Guardium S-TAP for VSAM started task JCL is located in the AUVJSTC member of the InfoSphere Guardium S-TAP for VSAM sample library (SAUVSAMP).

To configure the started task JCL, complete these steps:

1. Copy the InfoSphere Guardium S-TAP for VSAM started task JCL to your system PROCLIB.

Tip: It is recommended that you name the InfoSphere Guardium S-TAP for VSAM started task member **AUVSTAPV** because this name is easily identifiable with the InfoSphere Guardium S-TAP for VSAM product.

2. Verify that the statement://AUVSTAPV PROC OPTSMBR=OPTIONS points to the member name **OPTIONS**.

Note: OPTIONS is the default member name of the subsystem options member of the InfoSphere Guardium S-TAP for VSAM control data set allocated in Step 3: Allocate the Control Data Set.

3. Configure the started task JCL that you copied to your system PROCLIB by replacing AUV.V8R2 with the high-level qualifier of the installed InfoSphere Guardium S-TAP for VSAM load library.

Note:

- A DD statement with a DDNAME of OPTIONS must be present within the InfoSphere Guardium S-TAP for VSAM started task. This DD statement points to the subsystem options member of the InfoSphere Guardium S-TAP for VSAM control data set (OPTIONS) which contains the global settings for the product. When the started task is initiated, it references the data in the subsystem options member to establish global settings, including the subsystem identifier for this specific instance of InfoSphere Guardium S-TAP for VSAM.
 - A DD statement with a DDNAME of CONTROL must be present within the InfoSphere Guardium S-TAP for VSAM started task. For example: //CONTROL DD DSN=AUV.V8R2.CONTROL,DISP=SHR This DD statement points to the InfoSphere Guardium S-TAP for VSAM control data set that contains the collection policy in the RULEDEFS member.
 - The two DD statements with DDNAMES of RULEDEFS and RULEDEFB must be present and must point to the same control data set name specified in the OPTIONS and CONTROL DD statements. The member names RULEDEFS and RULEDEFB must not be changed.
 - To ensure proper installation and operation, the high-level qualifier you specify for the control data set JCL in Step 3: Allocate the control data set must match the high-level qualifier you specify in the started task JCL.
 - The started task must have the authority to read and update the control data set and load library.
4. After you configure the started task JCL, add it to z/OS for started task initiation.

Note: Do not attempt to initiate the started task until you have finished configuring InfoSphere Guardium S-TAP for VSAM. Attempting to initiate the started task prior to completing configuration could cause the started task to fail.

Starting the agent

This information describes how to start and stop the InfoSphere Guardium S-TAP for VSAM started task.

To start and stop the InfoSphere Guardium S-TAP for VSAM started task:

1. Initiate the InfoSphere Guardium S-TAP for VSAM started task by issuing the START command from the operator console. For example: **START AUVSTAPV**
2. Stop the InfoSphere Guardium S-TAP for VSAM started task by issuing the STOP command from the operator console. For example: **STOP AUVSTAPV**

Note: It is recommended that you configure the InfoSphere Guardium S-TAP for VSAM started task to start automatically when z/OS is IPLed. To accomplish this, add the appropriate command to the COMMNDxx member in SYS1.PARMLIB. (If needed, consult your support personnel to implement this automatic startup.)

Configuration appendix

This section provides additional material for InfoSphere Guardium S-TAP for VSAM configuration.

Sample library members

Use the following sample library members shipped with InfoSphere Guardium S-TAP for VSAM to install and configure the product.

Table 1. Sample library members

Member	Type	Description
AUVJCNTRL	JCL	Sample JCL to allocate and initially populate the control data set.
AUVJSTC	JCL	Sample PROC to start the InfoSphere Guardium S-TAP for VSAM agent address space.
AUVSOPTS	Data	Initial data used to populate the control data set OPTIONS member.
AUVSRDEF	Data	Initial data used to populate the control data set RULEDEFS and RULEDEFB members.

InfoSphere Guardium S-TAP administration

To enable InfoSphere Guardium S-TAP servers and agents to interact, you must configure them to communicate. Only one server instance is permitted for each SYSPLEX. This server instance is used to communicate with all agent instances executing within the SYSPLEX.

Server and agent communications

The InfoSphere Guardium S-TAP for VSAM server and agent communicate with each other using TCP/IP connections.

The InfoSphere Guardium S-TAP for VSAM TCP/IP connection must be manually configured.

Agent configuration

This information describes InfoSphere Guardium S-TAP for VSAM agent configuration.

Only one agent per z/OS image is required. When configuring an agent instance, specify the host name or IP address and the port number on which the server is running. These values are specified by the TCP/IP_ADDRESS and PORT configuration elements in the agent configuration file (CONTROL member OPTIONS). When the agent is started, it uses this configuration information to connect to the server. The complete name of this member is OPTIONS.

Note: For more information on setting up configuration profiles through the Guardium appliance, please see the IBM InfoSphere Guardium S-TAP for VSAM on z/OS section of the Guardium appliance help system.

Chapter 3. Reference information

This section provides IBM InfoSphere Guardium S-TAP for VSAM reference information.

VSAM data set types

The STAP for VSAM agent collects SMF data for the following VSAM data set types.

ESDS Entry sequence data set

KSDS Keyed sequence data set

RRDS Relative record data set

VRRDS

Variable length relative record data set

LDS Linear data set

The agent audits these data set types by correlating data from a combination of SMF record types to construct one of the following audit events.

DATA SET OPEN

An OPEN event against a supported data set type

DATA SET CLOSE

A CLOSE event against a supported data set type

DATA SET UPDATE

An UPDATE event against a supported data set type

DATA SET DELETE

A DELETE event of a supported data set type

DATA SET RENAME

A RENAME event of a supported data set type

DATA SET CREATE

A DEFINE or New Allocation event of a supported data set type

DATA SET ALTER

An ALTER of the attributes of a supported data set type

RACF ALTER

A security facility ALTER access of a supported data set type

RACF CONTROL

A security facility CONTROL access of a supported data set type

RACF UPDATE

A security facility UPDATE access of a supported data set type

RACF READ

A security facility READ access of a supported data set type

SMF record types collected by InfoSphere Guardium S-TAP for VSAM

Table 2. SMF record types and descriptions

Record Number	TYPE	SMF Record Description	SMF Collector Events
30	Common Address Space Work	The type 30 SMF record provides accounting information. It consolidates data that is found in record types 4, 5, 20, 34, 35, and 40 (which simplifies accounting by installation-written post processing routines), and it provides additional information. These records are used for accounting and for updating other existing records. For internal use only.	SMF030 SMF030S
42	SMS Statistics	Records statistical information related to the I/O performed against VSAM data sets.	SMF042
60	VSAM Volume Data Set Updated	Record type 60 is written when a VSAM Volume Record (VVR) or a Non-VSAM Volume Record (NVR) is inserted, updated, or deleted from a VSAM Volume Data Set (VVDS); for example, when a VSAM cluster is defined, closed, or deleted. One type 60 record is written for each VVR or NVR written or deleted.	SMF060
61	SMF Collector Event	Record type 61 is written during any processing that results in a DEFINE request to Catalog Management Services, such as: IDCAMS DEFINE IEHPROGM CATLG One type 61 record is written for each record inserted or updated in a catalog. Record type 61 identifies the entry being defined, and the catalog in which the catalog record is written. It gives the new or updated catalog record and identifies the job-by-job log and user identifiers.	SMF061
62	VSAM Component or Cluster Opened	Record type 62 identifies the VSAM component or cluster and indicates whether it was successfully opened. It names the VSAM catalog in which the object is defined and the volumes on which the catalog and object are stored. It identifies the job that issued the OPEN macro by job log identification and user identification. The job name and the time and date that the reader recognized the JOB card for this job constitute the job log identification.	SMF062

Table 2. SMF record types and descriptions (continued)

Record Number	TYPE	SMF Record Description	SMF Collector Events
64	VSAM Component or Cluster Status	<p>Record type 64 is written when:</p> <ol style="list-style-type: none"> 1. A VSAM component or cluster is closed. 2. A VSAM must switch to another volume to continue to read or write. 3. There is no more space available for VSAM to continue processing. <p>If a cluster is closed, one record is written for each component in the cluster.</p>	SMF064
65	ICF Delete Activity	<p>Record type 65 identifies the entry being deleted and the catalog in which the catalog record is updated or deleted, and gives the updated or deleted catalog record. It indicates whether a VSAM cluster or non-VSAM data set was scratched (function indicator = 'S'), or only catalog information was deleted (function indicator = 'U'). It identifies the job by job log identification and user identification.</p>	SMF065
66	ICF Alter Activity	<p>Record type 66 identifies the entry being altered and the catalog in which the catalog record is written or deleted, and gives the new, updated, or deleted catalog record. It indicates if the entry was renamed (function indicator = 'R') and, if so, gives the old and new names of the entry. It identifies the job by job log identification and user identification. The job name, time, and date that the reader recognized the JOB card (for this job) constitutes the job log identification. If a system task caused the record to be written, the job name and user identification fields contain blanks and the time and date fields contain zeros.</p>	SMF066
80	RACF Processing	Used to capture RACF security failures when accessing VSAM data sets.	SMF080
89	Usage Data	Used to determine the LOCAL to UTC time differential from the SMF89DIO field.	None

Important: InfoSphere Guardium S-TAP for VSAM can only report events that are being collected by SMF. If any SMF record type in this table is not being collected at your site, InfoSphere Guardium S-TAP cannot report that event.

SMF record types

SMF records are correlated to InfoSphere Guardium S-TAP context as shown in the SMF record types context table.

SMF record types and contexts

Table 3. SMF record types and contexts

Record Number	Record Subtype	SMF Context
30		Accounting
42	I/O Statistics	Accounting
60	Insert	Created
61	DEFINE/CATLG	Created
62	Update	OPEN Update
64		CLOSE
65		Deleted
66		ALTER
66	Rename	Rename
80		Security Access

Note:

- There is not a one to one correlation between SMF records and context events reported. If more than one SMF record is encountered within a step for a single event, then subsequent records are considered duplicates.
- SMF context events are stored in a temporary area until a closure event is received.
- Type 30 records are closure records for a job. When the type 30 end-of-job is encountered, SMF data is then collected and saved, 'closed out', and sent to the Guardium appliance for presentation to the client. In the case of long running tasks, this process may require a significant duration of time.

Chapter 4. Troubleshooting

Use these topics to diagnose and correct problems that you experience with InfoSphere Guardium S-TAP.

Messages and codes for IBM InfoSphere Guardium S-TAP for VSAM on z/OS

This information documents the messages and error codes issued by IBM InfoSphere Guardium S-TAP. Messages are presented in ascending alphabetical and numerical order.

Error messages

All messages have a severity code printed as the last character of the message ID. The severity codes are described in this table:

Table 4. Error message severity codes

Severity Code	Description
I	Information message. No user action required.
F	Detailed information message: No user action required.
W	Warning message. Results may not be as expected.
E	Error message. Some may be user-correctable, read the User Response to determine the course of action.
S	Severe message: User action required.

AUV1000E **INSUFFICIENT OPERATING SYSTEM LEVEL; OS/390 R2.10 (SP6.10) OR HIGHER REQUIRED**

Explanation: Product initialization has determined that the level of the operating system is not at a level high enough to support the product.

User response: Run the product on a system with OS/390 at the 2.10 level or above.

AUV1001I **RULEDEFS ACTIVATION SUCCESSFUL –SSSS**

Explanation: This message is issued to the operator console following successful activation of rule definitions using the ACTIVATE RULEDEFS operator command.

User response: No action is required.

AUV1002E **INSUFFICIENT VIRTUAL STORAGE FOR PRODUCT PROCESSING**

Explanation: Product initialization was unable to obtain the required above-the-line storage.

User response: Increase the amount of available

above-the-line storage and attempt to restart the product. If this is not successful, contact IBM Support.

AUV1003E **INSUFFICIENT VIRTUAL STORAGE FOR PRODUCT PROCESSING**

Explanation: Product initialization was unable to obtain the required below-the-line storage.

User response: Increase the amount of available below-the-line storage and attempt to restart the product. If this is not successful, contact IBM Support.

AUV1004E **UNABLE TO LOCATE REQUIRED DDNAME - CONTROL**

Explanation: During product initialization, the CONTROL DD statement was unable to be located in the product started task procedure.

User response: The CONTROL DD statement is required. Add the CONTROL DD statement to the product started task procedure and retry.

AUV1005E **ERROR OCCURRED DURING SWAREQ PROCESSING FOR JFCB FOR DDNAME CONTROL, RC=rrrrrrrr**

AUV1006E • AUV1018E

Explanation: An internal error (*rrrrrrrr*) occurred while processing the CONTROL DD statement during product initialization.

User response: Make sure that the CONTROL DD statement points to a valid partitioned data set and retry. If the error persists, contact IBM Support.

AUV1006E UNABLE TO LOCATE REQUIRED DDNAME - OPTIONS

Explanation: During product initialization, the OPTIONS DD statement was unable to be located in the product started task procedure.

User response: The OPTIONS DD statement is required. Add the OPTIONS DD statement to the product started task procedure and retry.

AUV1007E ERROR OCCURRED DURING SWAREQ PROCESSING FOR JFCB FOR DDNAME OPTIONS, RC=*rrrrrrrr*

Explanation: An internal error (*rrrrrrrr*) occurred while processing the OPTIONS DD statement during product initialization.

User response: Make sure that the OPTIONS DD statement points to a valid data set and retry. If the error persists, contact IBM Support.

AUV1008I RULEDEFS NOT ACTIVATED -*ssss*

Explanation: This message is issued in response to the DISPLAY RULEDEFS operator command when no rule definitions have been activated.

User response: No action is required.

AUV1009E OPEN FAILED FOR PROCESSING OPTIONS MEMBER; DEFAULT OPTIONS USED

Explanation: Open processing was unsuccessful for the OPTIONS member so the default options were used.

User response: Make sure that the OPTIONS DD statement points to a valid data set and retry. If the error continues, contact IBM Support.

AUV1010I PRODUCT INTERCEPTS HAVE BEEN ENABLED

Explanation: This message is issued during product initialization and indicates successful installation of product intercepts.

User response: No action is required.

AUV1012E ATTACH FOR AUVMAIN FAILED, RC=*rrrrrrrr*

Explanation: During product initialization, the startup of an internal task failed. The value *rrrrrrrr* identifies the internal error code.

User response: Examine other error messages that might have occurred at the same time as this message to aid in determining the cause of the failure. If no cause can be determined, contact IBM Support.

AUV1013I PRODUCT TERMINATION IS COMPLETE

Explanation: This message is issued in response to the product shutdown command at completion of termination processing.

User response: No action is required.

AUV1014E INVALID START PARAMETERS SPECIFIED; IGNORED

Explanation: An invalidly constructed parameter was specified on the START command for the started task; it will be ignored.

User response: Correct the START command parameter and restart the started task.

AUV1015E INVALID PARM SPECIFIED - *parm*

Explanation: An unrecognized parameter was specified on the START command for the started task where *parm* is the unrecognized parameter.

User response: Correct the START command parameter and restart the started task.

AUV1016E DELIMITER "=" IS MISSING - *parm*

Explanation: The START parameter specified by *parm* requires an equal sign followed by a keyword value; no equal sign was found.

User response: Correct the START command parameter and restart the started task.

AUV1017I START PARAMETER SPECIFIED - *parm*

Explanation: The TRACING START parameter specified by *parm* was successfully recognized and processed.

User response: No action is necessary.

AUV1018E INVALID VALUE SPECIFIED FOR PARAMETER - *parm*

Explanation: The TRACING START parameter keyword value for the parameter specified by *parm* was invalid.

User response: Correct the START parameter keyword value and restart the started task.

AUV1019I START PARAMETER SPECIFIED - parm

Explanation: The KEY START parameter specified by parm was successfully recognized and processed.

User response: No action is necessary.

AUV1020E VALUE SPECIFIED FOR PARAMETER - parm

Explanation: The KEY START parameter keyword value for the parameter specified by parm was invalid.

User response: Correct the START parameter keyword value and restart the started task.

AUV1021E INVALID OPTION SPECIFIED - ppppppppp

Explanation: During product initialization, an invalid keyword was encountered when processing the subsystem options in the OPTIONS member. The value *ppppppppp* is the invalid option encountered — or the value "(NONE)" if blank options were specified.

User response: Correct the specified option keyword and restart the product.

AUV1021E INVALID OPTION SPECIFIED - ppppppppp

Explanation: During product initialization, an invalid keyword was encountered when processing the subsystem options in the OPTIONS member. The value *ppppppppp* is the invalid option encountered — or the value "(NONE)" if blank options were specified.

User response: Correct the specified option keyword and restart the product.

AUV1022E REQUIRED DELIMETER "=" IS MISSING - ppppppppp

Explanation: During product initialization, while processing the subsystem options in the OPTIONS member, a keyword was encountered which required an equal sign (=) but it was found to be missing. The value *ppppppppp* indicates the associated keyword.

User response: Correct the specified option keyword and restart the product.

AUV1023E INVALID VALUE SPECIFIED FOR OPTION - ppppppppp

Explanation: During product initialization, while processing the subsystem options in the OPTIONS member, a keyword was encountered with an invalid value. The value *ppppppppp* indicates the option with the incorrect value.

User response: Correct the specified option keyword and restart the product.

AUV1024I PROCESSING OPTION SET - SSID=ssss

Explanation: This message is issued during product initialization to display the value (*ssss*) set for the SSID keyword in the OPTIONS member.

User response: No action is required.

AUV1025E INVALID VALUE SPECIFIED FOR OPTION - SSID=ssss

Explanation: During product initialization, while processing the subsystem options in the OPTIONS member, an incorrect value was encountered for the SSID option. The value *ssss* indicates the invalid value.

User response: Correct the specified option keyword and restart the product.

AUV1026I PROCESSING OPTION SET - INITIAL_RULEDEF=rrrrrrrrr

Explanation: This message is issued during product initialization to display the value (*rrrrrrrrr*) specified for the INITIAL_RULEDEF keyword in the OPTIONS member.

User response: No action is required.

AUV1027E INVALID VALUE SPECIFIED FOR OPTION -INITIAL_RULEDEF=rrrrrrrrr

Explanation: During product initialization, while processing the subsystem options in the OPTIONS member, an incorrect value was encountered for the INITIAL_RULEDEF option. The value *rrrrrrrrr* indicates the invalid value.

User response: Correct the specified option keyword and restart the product.

AUV1028I PROCESSING OPTION SET - PORT=nnnnnn

Explanation: This message is issued during product initialization to display the value (*nnnnnn*) specified for the PORT keyword in the OPTIONS member.

User response: No action is required.

AUV1029E INVALID VALUE SPECIFIED FOR OPTION - PORT=nnnnnn

Explanation: During product initialization, while processing the subsystem options in the OPTIONS member, an incorrect value was encountered for the PORT option. The value *nnnnnn* indicates the invalid value.

AUV1030I • AUV1043E

User response: Correct the specified option keyword and restart the product.

AUV1030I PROCESSING OPTION SET –
PING_RATE=*nnnnn*

Explanation: This message is issued during product initialization to display the value (*nnnnn*) specified for the PING_RATE keyword in the OPTIONS member.

User response: No action is required.

AUV1031E INVALID VALUE SPECIFIED FOR
OPTION – PING_RATE=*nnnnn*

Explanation: During product initialization, while processing the subsystem options in the OPTIONS member, an incorrect value was encountered for the PING_RATE option. The value *nnnnn* indicates the invalid value.

User response: Correct the specified option keyword and restart the product.

AUV1032I PROCESSING OPTION SET –
RETRY_INTERVAL=*nnnnn*

Explanation: This message is issued during product initialization to display the value (*nnnnn*) specified for the RETRY_INTERVAL keyword in the OPTIONS member.

User response: No action is required.

AUV1033E VALUE SPECIFIED FOR OPTION –
RETRY_INTERVAL=*nnnnn*

Explanation: During product initialization, while processing the subsystem options in the OPTIONS member, an incorrect value was encountered for the RETRY_INTERVAL option. The value *nnnnn* indicates the invalid value.

User response: Correct the specified option keyword and restart the product.

AUV1034E ERROR IN NAME/TOKEN RETRIEVAL
PROCESSING, RC=*rrrrrrrr*

Explanation: During product initialization, an internal system error (*rrrrrrrr*) was encountered in establishing the product.

User response: Please contact IBM Support.

AUV1035E NAME/TOKEN ALREADY EXISTS,
BUT TOKEN IS ZERO

Explanation: During product initialization, an internal system error was encountered in establishing the product.

User response: Please contact IBM Support.

AUV1036E NAME/TOKEN ALREADY EXISTS,
BUT TOKEN DOES NOT POINT TO A
VALID PRODUCT BLOCK

User response: IPL the system before starting the product. If this does not resolve the problem, contact IBM Support.

AUV1038E UNABLE TO OBTAIN STORAGE FOR
PRODUCT CONTROL BLOCK,
RC=*rrrrrrrr*

Explanation: During product initialization, above-the-line CSA storage was unable to be obtained a product control block as indicated by the internal return code *rrrrrrrr*.

User response: Investigate and correct the shortage of above-the-line CSA storage and restart the product. If the problem persists, contact IBM Support.

AUV1040E ERROR IN NAME/TOKEN CREATE
PROCESSING, RC=*rrrrrrrr*

Explanation: During product initialization, an internal system error (*rrrrrrrr*) was encountered in establishing the product.

User response: Please contact IBM Support.

AUV1041I PRODUCT INTERCEPTS HAVE BEEN
ESTABLISHED

Explanation: This message is issued when all intercepts have been successfully established.

User response: No action is required.

AUV1042E UNABLE TO OBTAIN STORAGE FOR
COMMON AREA ROUTINE,
RC=*rrrrrrrr*

Explanation: During product initialization, above-the-line CSA storage was unable to be obtained for loading a required product routine as detailed by the internal return code *rrrrrrrr*.

User response: Investigate and correct the shortage of above-the-line CSA storage and restart the product. If the problem persists, contact IBM Support.

AUV1043E BLDL FAILED FOR *nnnnnnnnnnnn*,
RC=*rrrrrrrr*

Explanation: During product initialization, a required load module was unable to be successfully located. The value *nnnnnnnnnnnn* identifies the load module and the value *rrrrrrrr* specifies the internal return code in error.

User response: Verify that the load modules for the product are accessible either in a STEPLIB in the product started task, or in the system LINKLIST concatenation and then restart the product.

AUV1044E UNABLE TO DETERMINE ORIGIN OF
mmmmmmmmmm

Explanation: During product initialization while processing the product load module *mmmmmmmmmm* an error was encountered.

User response: Verify that the load modules for the product are accessible either in a STEPLIB in the product started task or in the system LINKLIST concatenation and restart the product.

AUV1046E PRIVATE LOAD FAILED FOR
mmmmmmmmmm

Explanation: During product initialization, the processing of a product load module (*mmmmmmmmmm*) to be located in above-the-line private storage failed.

User response: Verify that the load modules for the product are accessible either in a STEPLIB in the product started task, or in the system LINKLIST concatenation and then restart the product. In addition, check the available amount of above-the-line private storage available for the product started task. After correcting the problem, restart the product. If the error cannot be determined, contact IBM Support.

AUV1047E COMMON LOAD FAILED FOR
mmmmmmmmmm

Explanation: During product initialization, the processing of a product load module (*mmmmmmmmmm*) to be located in above-the-line common storage, failed.

User response: Verify that the load modules for the product are accessible either in a STEPLIB in the product started task, or in the system LINKLIST concatenation and then restart the product. In addition, check the available amount of above-the-line common storage available for the product started task. After correcting the problem, restart the product. If the error cannot be determined, contact IBM Support.

AUV1048I PROCESSING OPTION SET –
RETRY_COUNT=*nnnnn*

Explanation: This message is issued during product initialization to display the value (*nnnnn*) specified for the RETRY_COUNT keyword in the OPTIONS member.

User response: No action is required.

AUV1049E INVALID VALUE SPECIFIED FOR
OPTION – RETRY_COUNT=*nnnnn*

Explanation: During product initialization, while processing the subsystem options in the OPTIONS member, an incorrect value was encountered for the RETRY_COUNT option. The value *nnnnn* indicates the invalid value.

User response: Correct the specified option keyword and restart the product.

AUV1050E UNABLE TO ESTABLISH
NNNNNNNNNNNNNNNNN EXIT,
RC=*RRRRRRRR*, RS=*SSSSSSSS*

Explanation: During started task initialization or as a result of the ENABLE SMFEXIT1 operator command, an error was encountered attempting to establish the SMF exit named *NNNNNNNNNNNNNNNNN*. The return code encountered is specified by *RRRRRRRRR* and the reason code is specified by *SSSSSSSS*.

User response: Please contact IBM Support.

AUV1052E UNABLE TO DELETE
NNNNNNNNNNNNNNNNN EXIT,
RC=*RRRRRRRR*, RS=*SSSSSSSS*

Explanation: During started task termination or as a result of the DISABLE SMFEXIT1 operator command, an error was encountered attempting to delete the SMF exit named *NNNNNNNNNNNNNNNNN*. The return code encountered is specified by *RRRRRRRRR* and the reason code is specified by *SSSSSSSS*.

User response: Please contact IBM Support.

AUV1054E GSSB IS NOT PRESENT

Explanation: During activation of a policy RULEDEFS member, a necessary InfoSphere Guardium S-TAP for VSAM on z/OS control block could not be located.

User response: Ensure that the InfoSphere Guardium S-TAP for VSAM on z/OS started task has been successfully started. If no error was encountered during the initialization of the started task, contact IBM technical support.

AUV1055E GSSB CONTROL BLOCK ID IS
INVALID

Explanation: During activation of a policy RULEDEFS member, a necessary InfoSphere Guardium S-TAP for VSAM on z/OS control block was located but it is not valid.

User response: Ensure that the InfoSphere Guardium S-TAP for VSAM on z/OS started task has been successfully started. If no error was encountered during the initialization of the started task, contact IBM technical support.

AUV1056I PROCESSING OPTION SET –
SOCKET_TIMEOUT=*nnnnn*

Explanation: This message is issued during product initialization to display the value (*nnnnn*) specified for the SOCKET_TIMEOUT keyword in the OPTIONS member.

AUV1058E • AUV1105E

User response: No action is required.

AUV1058E UNABLE TO LOCATE LPDE FOR IGC0005E

Explanation: During product initialization, a required pointer to an operating system module could not be located.

User response: Please contact IBM Support.

AUV1058I PROCESSING OPTION SET – TCP/IP_ADDRESS=*a**

Explanation: This message is issued during product initialization to display the value (*a**) specified for the TCP/IP_ADDRESS keyword in the OPTIONS member.

User response: No action is required.

AUV1059E INVALID VALUE SPECIFIED FOR OPTION - TCP/IP_ADDRESS=*a**

Explanation: During product initialization, while processing the subsystem options in the OPTIONS member, an incorrect value was encountered for the TCP/IP_ADDRESS option. The value *a** indicates the invalid value.

User response: Correct the specified option keyword and restart the product.

AUV1060I PROCESSING OPTION SET – AGENT_NAME=*a**

Explanation: This message is issued during product initialization to display the value (*a**) specified for the AGENT_NAME keyword in the OPTIONS member.

User response: No action is required.

AUV1061E VALUE SPECIFIED FOR OPTION – AGENT_NAME=*a**

Explanation: During product initialization, while processing the subsystem options in the OPTIONS member, an incorrect value was encountered for the AGENT_NAME option. The value *a** indicates the invalid value.

User response: Correct the specified option keyword and restart the product.

AUV1073W MAXIMUM ACTIVE SUBSYSTEMS EXCEEDED (1)

Explanation: The current iteration of the product being started would exceed the limit of one concurrently active subsystems on a single z/OS system. Startup for the current iteration is terminated.

User response: If the current iteration of the product is needed, shut down one of the already active

subsystems and then restart the current iteration. To display all currently active subsystems use the "display,subsystems,all" command.

AUV1074E DUPLICATE SUBSYSTEM FOUND FOR SSID=*ssss*

Explanation: During product initialization, a duplicate product control block was encountered for the subsystem ID *ssss*.

User response: Please contact IBM Support.

AUV1100E ACRONYM CHECK FAILED FOR GSSB

Explanation: An internal error occurred within the product during product initialization.

User response: Please contact IBM Support.

AUV1101E INSUFFICIENT VIRTUAL STORAGE FOR PRODUCT PROCESSING

Explanation: Main task startup was unable to obtain enough above-the-line private storage to initialize.

User response: Increase the amount of above-the-line private storage. If the problem persists, contact IBM Support.

AUV1102E ERROR OCCURRED IN CROSS-MEMORY INITIALIZATION

Explanation: An internal error occurred during main task start-up.

User response: Please contact IBM Support.

AUV1103E ATTACH FOR AUVPING FAILED, RC=*rrrrrrrr* -*ssss*

Explanation: During initialization of the InfoSphere Guardium S-TAP for VSAM started task, an error was encountered during the attach of the subtask named AUVPING for the subsystem *SSSS*. The return code encountered is specified by *RRRRRRRR*.

User response: Ensure that the STEPLIB for the started task contains all of the load modules included with the InfoSphere Guardium S-TAP for VSAM on z/OS product. If the STEPLIB appears to correctly contain all of the product load modules, contact IBM technical support.

AUV1105E ATTACH FOR AUVSSRP FAILED, RC=*rrrrrrrr* -*ssss*

Explanation: During initialization of the InfoSphere Guardium S-TAP for VSAM started task, an error was encountered during the attach of the subtask named AUVSSRP for the subsystem *SSSS*. The return code encountered is specified by *RRRRRRRR*.

User response: Ensure that the STEPLIB for the started task contains all of the load modules Included with the InfoSphere Guardium S-TAP for VSAM on z/OS product. If the STEPLIB appears to correctly contain all of the product load modules, contact IBM technical support.

AUV1105I SUBSYSTEM IS ACTIVE AND ENABLED

Explanation: This message indicates that the main product task has successfully started and is now active.

User response: No action is required.

AUV1106I SUBSYSTEM INITIALIZATION IS COMPLETE

Explanation: This message is issued when the main product task has successfully completed initialization processing.

User response: No action is required.

AUV1107I PRODUCT TERMINATION HAS BEEN REQUESTED

Explanation: This message is issued when the main product task has initiated subsystem shutdown processing, either due to a command request or because of an unrecoverable error condition.

User response: No action is required if this is due to a command request. If this is due to an unrecoverable error, restart the subsystem address space. Contact IBM Technical Support if problems persist.

AUV1111E UNABLE TO OBTAIN STORAGE FOR COMMON AREA ROUTINE, RC=rrrrrrrr

Explanation: Product subsystem initialization was unable to obtain a sufficient amount of storage to load a required module.

User response: Check and increase the amount available above- and below-the-line storage and restart the product. If the error persists, contact IBM Support.

AUV1112E BLDL FAILED FOR mmmmmmmmm, RC=rrrrrrrr

Explanation: During product subsystem initialization, a required load module was unable to be successfully located. The value *mmmmmmmmmm* identifies the load module and the value *rrrrrrrr* specifies the internal return code in error.

User response: Verify that the load modules for the product are accessible either in a STEPLIB in the product started task or in the system LINKLIST concatenation and then restart the product.

AUV1113E UNABLE TO DETERMINE ORIGIN OF mmmmmmmmmmm

Explanation: An error was encountered during product subsystem initialization while processing the product load module *mmmmmmmmmm*.

User response: Verify that the load modules for the product are accessible either in a STEPLIB in the product started task or in the system LINKLIST concatenation and then restart the product

AUV1115E INITIAL LOAD FAILED FOR mmmmmmmmmmm

Explanation: During product subsystem initialization, a required load module (*mmmmmmmmmm*) did not load successfully.

User response: Verify that the load modules for the product are accessible either in a STEPLIB in the product started task or in the system LINKLIST concatenation and then restart the product. In addition, check the available amount of above-the-line private storage available for the product started task. After correcting the problem restart the product. If the error cannot be determined, contact IBM Support.

AUV1116E DIRECTED LOAD FAILED FOR mmmmmmmmmmm

Explanation: During product subsystem initialization, a required load module (*mmmmmmmmmm*) did not load successfully.

User response: Verify that the load modules for the product are accessible either in a STEPLIB in the product started task or in the system LINKLIST concatenation and then restart the product.

AUV1117E NON-ZERO RETURN CODE FROM SYSEVENT, RC=rrrrrrrr -ssss

Explanation: During product subsystem initialization, an error (*rrrrrrrr*) was encountered when attempting to make the product started task address space non-swappable for subsystem *ssss*.

User response: Please contact IBM Support.

AUV1122E INVALID COMMAND SPECIFIED - cccccccc -ssss

Explanation: The product subsystem command parser received an error while processing the command (*cccccccc*) issued to the started task for subsystem ID *ssss*.

User response: Correct and re-issue the command.

AUV1123E INVALID COMMAND SPECIFIED -
cccccccc -ssss

Explanation: An invalid or null product subsystem command (cccccccc) was issued to the started task for subsystem ID ssss.

User response: Correct and re-issue the command.

AUV1123W ACTIVE SUBSYSTEM DETECTED;
PRODUCT-LEVEL MODULE NOT
RE-INITIALIZED

Explanation: While a version of the product subsystem was active, an attempt was made to initiate the same product subsystem. The subsequent attempt to start the subsystem fails. Only one instance of the subsystem is allowed on a z/OS image at a time.

User response: No action required. If you are attempting to initiate a new version of the subsystem, first shut down the currently executing version of the subsystem.

AUV1124E EXCESSIVE OPERANDS SPECIFIED
FOR COMMAND - ccccccc -ssss

Explanation: More operands than are allowed were specified for the **DISPLAY** command issued (ccccccc) to the product started task for subsystem ID ssss.

User response: Re-issue the command using the correct number of operands.

AUV1125E INSUFFICIENT OPERANDS
SPECIFIED FOR COMMAND - ccccccc
-ssss

Explanation: The command entered contains fewer operands than the minimum required. The command entered is ccccccc. The subsystem ID is ssss.

User response: Re-issue the command using the correct number of operands.

AUV1126E INVALID OPERAND SPECIFIED FOR
COMMAND - ccccccc -ssss

Explanation: The command entered contains an invalid operand. The command entered is ccccccc. The subsystem ID is ssss.

User response: Correct the invalid operand and re-issue the command.

AUV1127I SUBSYSTEM IS ACTIVE | INACTIVE
AND ENABLED | DISABLED -ssss

Explanation: This message is issued in response to the **DISPLAY SUBSYSTEM** or **DISPLAY ALL** operator command and shows the ACTIVE or INACTIVE status of the product subsystem and whether or not the subsystem is ENABLED or DISABLED for the subsystem ssss.

User response: No action is required.

AUV1128E INVALID COMMAND SPECIFIED -
command

Explanation: An unrecognized InfoSphere Guardium S-TAP for VSAM operator command was issued to the started task where command is the unrecognized command.

User response: Issue a valid operator command to the started task.

AUV1129I THERE ARE CURRENTLY NO
SUBSYSTEMS -ssss

Explanation: This message is issued in response to the product operator command **DISPLAY SUBSYSTEM ALL** when no subsystems are located.

User response: No action is required.

AUV1130I SUBSYSTEM xxxx IS ACTIVE |
INACTIVE AND ENABLED |
DISABLED -ssss

Explanation: This message is issued in response to the **DISPLAY SUBSYSTEM ALL** operator command issued to subsystem ssss and shows the ACTIVE or INACTIVE status of each product subsystem as identified by xxxx and whether or not the subsystem is ENABLED or DISABLED.

User response: No action is required.

AUV1131I RULEDEFS ACTIVATED ON
mm/dd/yyyy AT hh:mm:ss FROM
MEMBER mmmmmmmmm -ssss

Explanation: This message is issued in response to the **DISPLAY RULEDEFS** operator command to subsystem ID ssss and shows the date mm/dd/yyyy and time hh:mm:ss at which the active set of RULEDEFS was last activated as well as the member name (mmmmmmmmmm) from which they were activated.

User response: No action is required.

AUV1132I RULEDEFS NOT ACTIVATED -ssss

Explanation: This message is issued in response to the **DISPLAY RULEDEFS** operator command to subsystem ID ssss when no RULEDEFS were found to have been activated.

User response: No action is required.

AUV1135I PRODUCT INTERCEPTS ARE
ENABLED | DISABLED -ssss

Explanation: This message is issued in response to the **DISPLAY INTERCEPTS** operator command to subsystem

ID *ssss* and shows whether or not the intercepts are ENABLED or DISABLED.

User response: No action is required.

**AUV1136I PRODUCT-LEVEL TRACING IS
ENABLED | DISABLED -*ssss***

Explanation: This message is issued in response to the **DISPLAY TRACING** operator command to subsystem ID *ssss* and shows whether or not the product tracing facility is ENABLED or DISABLED.

User response: No action is required.

**AUV1137I SUBSYSTEM-LEVEL TRACING IS
ENABLED | DISABLED -*ssss***

Explanation: This message is issued in response to the **DISPLAY TRACING** operator command to subsystem ID *ssss* and shows whether or not the subsystem tracing facility is ENABLED or DISABLED.

User response: No action is required.

**AUV1138E EXCESSIVE OPERANDS SPECIFIED
FOR COMMAND - *ccccccc* -*ssss***

Explanation: More operands than are allowed were specified for the **ENABLE** command issued (*ccccccc*) to the product started task for subsystem ID *ssss*.

User response: Re-issue the command using the correct number of operands.

**AUV1140I SMFEXIT1 SUCCESSFULLY ENABLED
- *SSSS***

Explanation: The **ENABLE SMFEXIT1** command was successfully processed for the subsystem identified by *SSSS* and the SMF exits required by the product have been successfully loaded and enabled.

User response: No response is required.

AUV1141I SUBSYSTEM IS NOW ENABLED -*ssss*

Explanation: This message is issued in response to the **ENABLE SUBSYSTEM** operator command and indicates that the subsystem *ssss* was successfully enabled.

User response: No action is required.

**AUV1142I PRODUCT INTERCEPTS ARE NOW
ENABLED -*ssss***

Explanation: This message is issued in response to the **ENABLE INTERCEPTS** operator command and indicates that the intercepts for subsystem *ssss* were successfully enabled.

User response: No action is required.

**AUV1143I SMFEXIT1 SUCCESSFULLY DISABLED
-*SSSS***

Explanation: The **DISABLE SMFEXIT1** command was successfully processed for the subsystem identified by *SSSS* and the SMF exits required by the product have been successfully disabled and unloaded.

User response: No response is required.

**AUV1144I TRACING FOR PRODUCT IS NOW
ENABLED -*ssss***

Explanation: This message is issued in response to the **ENABLE TRACING** or **ENABLE TRACING ALL** operator command for subsystem ID *ssss* and indicates that product level tracing is now enabled.

User response: No action is required.

**AUV1145I TRACING FOR SUBSYSTEM IS NOW
ENABLED -*ssss***

Explanation: This message is issued in response to the **ENABLE TRACING ALL** operator command for subsystem ID *ssss* and indicates that subsystem level tracing is now enabled.

User response: No action is required.

**AUV1146E EXCESSIVE OPERANDS SPECIFIED
FOR COMMAND - *ccccccc* -*ssss***

Explanation: More operands than are allowed were specified for the **DISABLE** command issued (*ccccccc*) to the product started task for subsystem ID *ssss*.

User response: Re-issue the command using the correct number of operands.

AUV1149I SUBSYSTEM IS NOW DISABLED -*ssss*

Explanation: This message is issued in response to the **DISABLE SUBSYSTEM** operator command and indicates that the subsystem *ssss* was successfully disabled.

User response: No action is required.

**AUV1150I PRODUCT INTERCEPTS ARE NOW
DISABLED -*ssss***

Explanation: This message is issued in response to the **DISABLE INTERCEPTS** operator command and indicates that the intercepts for subsystem *ssss* were successfully disabled.

User response: No action is required.

AUV1152I TRACING FOR PRODUCT IS NOW DISABLED -SSSS

Explanation: This message is issued in response to the **DISABLE TRACING** or **DISABLE TRACING ALL** operator command for subsystem ID *ssss* and indicates that product level tracing is now disabled.

User response: No action is required.

AUV1153I TRACING FOR SUBSYSTEM IS NOW DISABLED -SSSS

Explanation: This message is issued in response to the **DISABLE TRACING ALL** operator command for subsystem ID *ssss* and indicates that subsystem level tracing is now disabled.

User response: No action is required.

AUV1154E EXCESSIVE OPERANDS SPECIFIED FOR COMMAND - ccccccc -ssss

Explanation: More operands than are allowed were specified for the **ACTIVATE** command issued (*ccccccc*) to the product started task for subsystem ID *ssss*.

User response: Re-issue the command using the correct number of operands.

AUV1151E SMFEXIT1 DISABLE NOT SUCCESSFUL -SSSS

Explanation: The **DISABLE SMFEXIT1** command was not successfully processed for the subsystem identified by *SSSS*. The SMF exits are still loaded and enabled.

User response: Contact IBM Technical Support.

AUV1175I DDDDDDDD MEMBER ACTIVATION SUCCESSFUL -SSSS

Explanation: A policy member as identified by *DDDDDDDD* for subsystem *SSSS* was successfully activated.

User response: No action is required.

AUV1155E ENABLE NOT SUCCESSFUL -SSSS

Explanation: The **ENABLE SMFEXIT1** command was not successfully processed for the subsystem identified by *SSSS*. The SMF exits are not loaded or enabled.

User response: Ensure that the STEPLIB for the started task contains all of the load modules required for the product. If no error can be found, contact IBM Technical Support.

AUV1156E SMFEXIT1 ALREADY ENABLED -SSSS

Explanation: The **ENABLE SMFEXIT1** command was issued for the subsystem identified by *SSSS* but the **SMFEXIT1** exits are already enabled. The SMF exits are still loaded and enabled.

User response: No action is required.

AUV1157E OPERANDS SPECIFIED FOR COMMAND - command

Explanation: An operator command as identified by *command* was issued to the started task for subsystem *SSSS*, but more operands were specified than are permitted for the particular command.

User response: Correct and reissue the operator command.

AUV1158E SMFEXIT1 ALREADY DISABLED -SSSS

Explanation: The **DISABLE SMFEXIT1** command was issued for the subsystem identified by *SSSS* but the **SMFEXIT1** exits are already disabled.

User response: No action is required.

AUV1175I DDDDDDDD MEMBER ACTIVATION SUCCESSFUL -SSSS

Explanation: A policy member as identified by *DDDDDDDD* for subsystem *SSSS* was successfully activated.

User response: No action is required.

AUV1176E DDDDDDDD MEMBER ACTIVATION FAILED - SEE JESYSMSG FOR DETAILS -SSSS

Explanation: A policy member as identified by *DDDDDDDD* for subsystem *SSSS* could not be successfully activated. The **JESYSMSG** output data set for the started task contains details of the error(s) encountered.

User response: Contact IBM Technical Support.

AUV1176I dddddddd MEMBER mmmmmmmmm ACTIVATION FAILED - SEE JESYSMSG FOR DETAILS -ssss

Explanation: This message is issued in response to the **ACTIVATE RULEDEFS** operator command or the initial **RULEDEFS** activation (as indicated from the **OPTIONS** member for subsystem ID *ssss*) to show that the activation of the **RULEDEFS** from member *mmmmmmmmmm* was not successful due to syntax errors.

User response: Review the error messages in the **JES SYSMSG** output for the product started task, and then

correct the errors and re-activate the RULEDEFS.

AUV1177I *ddddddd* **MEMBER** *mmmmmmmm*
ACTIVATION FAILED - FAILURE
CODE *cccc -ssss*

Explanation: This message is issued in response to the **ACTIVATE RULEDEFS** operator command, or the initial RULEDEFS activation (as indicated from the OPTIONS member for subsystem ID *ssss*) to show that the activation of the RULEDEFS from member *mmmmmmmm* was not successful due to an internal error as denoted by *cccc*.

User response: Review any error messages in the JES SYMSG output or the console log for the product started task to determine the possible cause of the error, then correct the errors and re-activate the RULEDEFS. If the problem persists, contact IBM Support.

AUV1179E *DDDDDDDD* **MEMBER ACTIVATION**
FAILED - FAILURE CODE *CCCCCCC*
-SSSS

Explanation: A policy member as identified by *DDDDDDDD* for subsystem *SSSS* could not be successfully activated. The failure code is identified by *CCCCCCC*.

User response: Contact IBM Technical Support.

AUV1184E **COMMAND VERB NOT UNIQUE -**
ccccccc -ssss

Explanation: More than one command exists that matches the abbreviation specified (*ccccccc*) for the command verb. The product subsystem processing the command was *ssss*.

User response: Re-issue the command, using a command verb abbreviation that more uniquely specifies the intended command.

AUV1185E **INVALID COMMAND SYNTAX**
SPECIFIED - *ssss*

Explanation: The command entered contains invalid syntax. The product subsystem processing the command was *ssss*.

User response: Review the command entered and correct the syntax.

AUV1191E **INVALID MODULE NAME SPECIFIED**
- ccccccc

Explanation: The command entered specifies an invalid module name. The command entered is *ccccccc*.

User response: Re-issue the command with a correct module name.

AUV1192I **MODULE** *mmmmmmmm* *vvvv* *ffffff*
ddddddd *tttt*

Explanation: Module header information is displayed, where *mmmmmmmm* is the name of the module, *vvvv* is the version, *ffffff* is the FMID *ddddddd* is the assembly date and *tttt* is the assembly time.

User response: None.

AUV1193I **MODULE** *mmmmmmmm* **LOCATED AT**
aaaaaaaa (*stgloc*)

Explanation: The module address (with offset if specified) is displayed, where *mmmmmmmm* is the name of the module, *aaaaaaaa* is the virtual storage address, and *stgloc* is the storage location ("PRIVATE" or "COMMON").

User response: None.

AUV1195E **ERROR OCCURRED DURING**
FREEMAIN FOR GPB, RC=*rrrrrrrr*

Explanation: During initialization, the product encountered an error and determined that termination was necessary. As part of termination, an attempt was made to freemain the product control block, but the FREEMAIN service encountered an error. *rrrrrrrr* contains the value returned in register 15. Product termination continues.

User response: Please contact IBM Support.

AUV1200E **UNABLE TO OBTAIN VIRTUAL**
STORAGE FOR WORKAREA

Explanation: A service task of the main product started task was unable to obtain the required amount of above-the-line storage.

User response: Increase the amount of above-the-line storage for the product task. If the problem persists, contact IBM Support.

AUV1202E **UNABLE TO OBTAIN VIRTUAL**
STORAGE FOR WORKAREA

Explanation: A service task of the main product started task was unable to obtain the required amount of above-the-line storage.

User response: Increase the amount of above-the-line storage for the product task. If the problem persists, contact IBM Support.

AUV1203E **UNABLE TO OBTAIN VIRTUAL**
STORAGE FOR WORKAREA

Explanation: During activation of a policy the product was unable to obtain the required amount of above-the-line storage.

AUV1204E • AUV2172E

User response: Increase the amount of above-the-line storage for the InfoSphere Guardium S-TAP for VSAM started task. If the problem persists, contact IBM Support.

AUV1204E UNABLE TO OBTAIN VIRTUAL STORAGE FOR WORKAREA

Explanation: A service task of the main product started task was unable to obtain the required amount of above-the-line storage.

User response: Increase the amount of above-the-line storage for the InfoSphere Guardium S-TAP for VSAM started task. If the problem persists, contact IBM Support.

AUV1213E ERROR RETRIEVING SSRE

Explanation: An internal error was encountered.

User response: Contact IBM Technical support.

AUV1214E UNEXPECTED SSRE QUEUE ERROR

Explanation: An internal error was encountered.

User response: Contact IBM Technical support.

AUV1215E UNEXPECTED SSRE QUEUE ERROR

Explanation: An internal error was encountered.

User response: Contact IBM Technical support.

AUV1438I SMFEXIT1 INTERCEPT IS EEEEEEEE -SSSS

Explanation: This message is issued in response to the InfoSphere Guardium S-TAP for VSAM operator command DISPLAY SMFEXIT1 for subsystem SSSS. The value EEEEEEEE indicates ENABLED or DISABLED.

User response: No response is required.

AUV1736E PRODUCT IS DISABLED

Explanation: This message is issued when, during the activation of a policy, the InfoSphere Guardium S-TAP for VSAM product is found to be disabled. The policy is not activated.

User response: Ensure that the InfoSphere Guardium S-TAP for VSAM started task has been started and that the product is enabled. If the problem persists, contact IBM Technical Support.

AUV1747E SUBSYSTEM IS NOT ACTIVE OR ENABLED

Explanation: This message is issued when, during the activation of a policy, the InfoSphere Guardium S-TAP for VSAM subsystem is found to be disabled or inactive. The policy is not activated.

User response: Ensure that the InfoSphere Guardium S-TAP for VSAM started task has been started and that the subsystem is enabled and the hooks are active. If the problem persists, contact IBM Technical Support.

AUV2104E ERROR OCCURRED IN FREEMAIN OF AUVSMFX1, RC=RRRRRRRR

Explanation: During termination processing of the InfoSphere Guardium S-TAP for VSAM started task or during the DISABLE of the SMFEXIT1 exits, the storage occupied by the module AUVSMFX1 could not be successfully freed. The error code encountered is specified by RRRRRRRR.

User response: No noticeable effect on system operations should be noticed as, although the module is located in Extended CSA, it consumes only a few kilobytes of storage. However, the cause of the error should be investigated by contacting IBM Technical support.

AUV2170I ATTEMPTING TO CONNECT TO THE GUARDIUM S-TAP APPLIANCE

Explanation: This is an informational message issued during product initialization indicating initialization progress.

User response: None required.

AUV2171I CALL TO GUARDIUM S-TAP APPLIANCE SUCCESSFUL

Explanation: This is an informational message issued during product initialization indicating that the z/OS host component of successfully connected to Guardium appliance.

User response: None required.

AUV2172E *function* CALL TO GUARDIUM S-TAP APPLIANCE FAILED

Explanation: An attempt to communicate with the Guardium appliance failed. Before reporting the failure, the server retried the request the number of times specified on the RETRY_INTERVAL parameter for the number of iterations specified on the RETRY_COUNT parameter. The *function* will be one of the following:

INIT Appliance initialization, which occurs at started task initialization.

PING Cyclical pings to the appliance that report server status.

SEND-SMF
Server transmission of the audit records to the appliance.

If any one of these service requests fail, the server address space is terminated.

User response: Correct any communications issue causing this failure and restart the server started task. Contact IBM Support for further assistance.

AUV2173E *function CALL TO GUARDIUM S-TAP APPLIANCE FAILED, RC = rc RC_STP= rc RS_STP= rs RC_GDM= rc RC_PB = rc RC_LST= rc RS_LST= rs*

Explanation: An attempt to communicate with the Guardium appliance failed. Before reporting the failure, the server retried the request the number of times specified on the `RETRY_INTERVAL` parameter for the number of iterations specified on the `RETRY_COUNT` parameter. The function will be one of the following:

INIT Appliance initialization, which occurs at started task initialization.

PING Cyclical pings to the appliance that report server status.

SEND-SMF
Server transmission of the audit records to the appliance. If any one of these service requests fail, the server address space is terminated.

The "rc" and "rs" text is replaced with numeric values that can assist IBM Technical Support with problem diagnosis, if the problem persists.

User response: Correct any communications issue causing this failure and restart the server started task. Contact IBM Support for further assistance.

AUV2900E **INVALID STORAGE REQUEST FOR CONTROL BLOCK** *nnnn -ssss*

Explanation: An internal error occurred while attempting to obtain a control block identified by *nnnn* subsystem ID *ssss*.

User response: Please contact IBM Support.

AUV2901E **INSUFFICIENT VIRTUAL STORAGE FOR CONTROL BLOCK** *nnnn -ssss*

Explanation: Sufficient storage was not available to obtain a required control block identified by *nnnn* subsystem ID *ssss*.

User response: Attempt to increase above-the-line or below-the-line storage for the job receiving the error message. If the error persists, contact IBM Support.

AUV2902E **ACRONYM CHECK FAILED WHILE ATTEMPTING TO FREE** *nnnn, DATA=dddd -ssss*

Explanation: An internal error occurred while attempting to free a control block identified by *nnnn* with the invalid data identified by *dddd* for subsystem ID *ssss*.

User response: Please contact IBM Support.

AUV2903E **FAILURE OCCURRED DURING FREEMAIN FOR** *nnnn -ssss*

Explanation: An internal error occurred while attempting to free a control block identified by *nnnn* subsystem ID *ssss*.

User response: Please contact IBM Support.

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Product Number: 5655-STV

Printed in USA

SC19-3346-02

