

Sun StorageTek™ Business Analytics Application Developer's Guide

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Chapter One – Introduction

This chapter introduces the logical design of the Sun StorageTek Business Analytics database. **Note**: With the acquisition of StorageTek, Sun Microsystems has re-branded and re-named Global Storage Manager (GSM) as Sun StorageTek Analytics, a member of the Enterprise Storage Manager portfolio of software solutions. The functionality of Business Analytics is identical to GSM, only the name has changed.The database tables are logically grouped as follows in this guide:

- Ownership
- General
- Home Page Cache
- Asset
- Data Polling
- Policy Alerting
- Switch
- Storage
- Configuration
- Host
- Backup
- NAS
- Database
- Custom Reports

The basic design of the Sun StorageTek Business Analytics database is discussed in the next section. In this document, the user tables are contained in the assurent database unless otherwise noted.

Accessing Reports

The ownership tables control what data you can view or otherwise manipulate through the Sun StorageTek Business Analytics reports. The Sun StorageTek Business Analytics report is what is generated when you select a menu item using the Sun StorageTek Business Analytics Management Console. The Management Console provides the graphical user interface through which standard and customized reports are obtained. The reports display data stored in the assurent database.

Within the ownership tables, the view_id and user_id are unique numbers that link users to their assigned views. The ownership is related to other table groups by acom_id. The acom_id is a unique number assigned by the database when sites are configured. Each data table in the other groups (switch, storage, host, backup) is associated with an acom_id.

Switch, storage and host table groups are associated by acom_id and WWPN. The WWPN is a sixteen-digit World Wide Name (WWN) which uniquely identifies the Host Bus Adapters, fabric switches, switch ports, and Fibre Channel adapters used in the SAN.

The Backup group of tables can be associated with the host group of tables using the acom_id and by correlating the backup client to the host name.

Database Timestamps

There are two types of timestamps used in the database. The two types are

- Basic
- Enhanced

Basic – Collected data from the environment is inserted directly into the database. Two timestamps are associated with each row of data

timestamp – Appended to the data by the local agent. This is the time the data is collected by the agent

agg_gmt_timestamp – Appended to the data by the data aggregator and is in GMT. This is applied at the time the data is inserted into the database. This timestamp is consistent across a broad section of data that is accomplished in the same data insertion transaction.

Enhanced – Collected data from the environment is checked against the data stored in the database for changes. If the collected data is the same as that stored in the database, then only the last_update column is changed.

If the data is not the same as that stored in the database, one of two events occurs:

- If the data is new, a row is added to the table
- If the data is a change to the data that is stored in the database, the to_time is changed to the present and a new row is added to the database.

The enhanced time fields are described as follows:

timestamp - Appended to the data by the local agent – see above

last_update – The time the data was last updated

to_time – Used to determine if the data is current or historical; will be a three-day "grace period" for configuration data calculated on the agg_gmt_timestamp.

agg_gmt_timestamp - Appended to the data by the Central Manager's Aggregator and is in expressed in GMT. This is applied at the time the data is inserted into the database. This timestamp is consistent across a broad section of data that is part of the same data insertion transaction.

Extract, Transformation, and Load Process

The Storage Wizard functionality of Sun StorageTek Business Analytics is designed upon a series of newly designed data warehouse tables. These data warehouse tables have the prefixes of "gsr_" in the assurent database and are populated through a database extraction, transformation, and loading process (ETL). The ETL process is responsible for looking up any newly inserted storage array data in the legacy array tables, normalizing and transforming the data into a format suitable for rapid query, and loading the data into the storage data warehouse tables.

By default, the ETL process is set up to run as a Database Batch Job and the frequency is every day at 4:00 am for the default user (gsmuser). This database batch job is controlled by the Policy Alert Agent. To view the database batch job, log in to the Sun Storagetek Business Analytics application as gsmuser, and go to Tools-> Database Administration -> DB Batch Jobs. The name of the policy is "ETL data loading process" and should be enabled by default. To schedule the ETL process at another time, modify this database batch job accordingly.

The ETL process will invoke a database stored procedure **gsr_main_proc_etl** in the assurent database. The execution result of the stored procedure is kept in the gsr_statistics table. The best time to schedule the ETL process is during the off hours, when the load on the database server is light, and after the records for the array tables are newly populated by the array agents.

By default, the ETL process is set up to run in "incremental mode". This means that the program will only process "delta" records, those records that are changed since the last ETL process; therefore, the impact on the database resources for the daily ETL process is lessened.

However, in the case of an upgrade for a very large database, the ETL process may consume a lot of resources in order to go through the legacy records for the first time and build the data warehouse tables to be used by the storage wizard. If you need to upgrade a large database, you should plan the upgrade process accordingly by allocating enough time and database resources to allow the ETL process to complete.

ETL Structure

The ETL logic consists of three parts: extraction (implemented in gsr_xtrt_proc_etl proc), transformation (gsr_trnf_proc_etl), and loading (gsr_load_proc_etl). All are called in proper order from the gsr_main_proc_etl stored procedure, which is the entry point of the ETL logic. The gsr_main_proc_etl stored procedure syntax is described below.

Parameter	Data Type	Default Value	Description
@p_batch_id	INT	NULL	Is the batch unique (among already existing in the gsr_statistics table) number. It's generated automatically if not supplied.
@p_Beg_From	CHAR(1)	NULL	Is used to run not the entire ETL process, but a specific part – extraction, transformation, or loading. If it's NULL (default), then the entire ETL process runs. If it's set to E or X, only the extraction runs. If set to T, only the transformation runs. If L, the only loading is run.
@p_Use_Trnx	CHAR(1)	NULL	If NULL or set to Y, the logic makes use of explicit transactions. Otherwise, the default for the server type of transactions is enforced.

Parameter	Data Type	Default Value	Description
@p_mode	INT	0	Controls delta versus full load processing. When it's NULL or set to 0, only the data added to the ASSURENT database since the last ETL run, based on the last update date, is processed (last delta). When set to 1, all data in the database is processed – full load. In production environments, deltas (versus full load) are recommended for processing mode.
@p_batch_size	INT	100000	Sets the number of rows to process in one procedure or statement. For the default value (100,000), the procedure logic will break the entire amount into 10 pieces, containing approximately 10,000 each. If the parameter is set to 1,000,000, or higher, all work will be done in one one procedure or statement.
@p_ClnDt	CHAR(1)	'N'	Controls data cleansing. The default value is N, which means no data cleansing provided. When set to yes, the logic will check all attributes for specific object in every record, correcting them if needed. This mechanism is intended to be invoked only when data issues arise or are possible.
@p_PrnMsg	CHAR(1)	'N'	Controls screen output. Its default value is N. When set to Y, the same information that is always recorded in the gsr_statistics table is printed on the screen as well.

Table 1 - ETL Structure

Because all the parameters have default values, the stored procedure, gsr_main_proc_etl, is typically called without having been passed any parameters.

```
EXEC gsr_main_proc_etl
```

Chapter Two – Ownership Tables

In the Sun StorageTek Business Analytics application, ownership controls what reports are available to a Management Console user. This chapter briefly describes some tables that are used to determine ownership.

gsa_acom

This table contains information that uniquely identifies a Local Manager. The Local Manager is located and integrated into each customer site or location. When you enter and submit data using the Management Console's **Add a New Site** form, the data is stored in this table. The gsat_bvm_acom_list tables stores associations between Local Managers and Sites that are created usin the Management Console.

The Central Manager Database Setup creates a default Local Manager.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
acom_sn	varchar(32)	Local Manager short name
acom_name	varchar(128)	Name of Local Manager
ip_address	varchar(8)	IP address of Local Manager
timestamp	datetime(8)	Time created

Table 2 – gsa_acom

gsa_dashboards

This table links a user to their current dashboard. Dashboard Administration is accessed using the Tools pull-down menu. The dashboard_id column is a primary key.

Column Name	Datatype	Description
dashboard_id	int(4)	Dashboard identifier
dashboard_name	varchar(32)	User-defined dashboard name
dashboard_description	varchar(255)	Optional descriptive text
dashboard_type	char(1)	A (all) or P (private)
created_date	datetime(8)	Time created
created_by	int(4)	User ID of creator
delete_flag	bit(1)	Deleted flag; 0 if not deleted and 1 if deleted
deleted_date	datetime(8)	Time deleted if applicable or null

Table 3 – gsa_dashboards

gsa_dashboard_default

This table links a user to their current dashboard. Dashboard Administration is accessed using the Tools pull-down menu.

Column Name	Datatype	Description
user_id	int(4)	User ID
dashboard_id	int(4)	Dashboard identifier

Table 4 – gsa_dashboard_default

gsa_dashboard_detail

This table identifies the components in the dashboard layout.

Column Name	Datatype	Description
dashboard_id	int(4)	Dashboard identifier
component_type	char(1)	P(ane)
component_id	int(4)	Pane identifier
valid_from	datetime(8)	Not currently used (null)
valid_to	datetime(8)	Not currently used (null)

Table 5 – gsa_dashboard_default

gsa_product

This table is the link between the user table and the site table.

Column Name	Datatype	Description
user_id	int(4)	User ID
site_id	int(4)	Site identifier
product	varchar (128)	Storability product name or N/A
timestamp	datetime(8)	Time created

Table 6 – gsa_product

gsa_site

This table identifies a customer site that was defined by using the Management Console's Site/Local Manager Administration menu. A site is defined as a set of acom_ids, and represents a single logical or physical location. Sites may be assigned as assets within asset views.

The Central Manager Database Setup creates a default site to which the default Local Manager is assigned.

Column Name	Datatype	Description
site_id	int(4)	Site identifier
acom_id	int(4)	Local Manager identifier
site_name	varchar(128)	Site name
site_location	varchar(128)	Site location
timestamp	datetime(8)	Time created

Table 7 – gsa_site

gsa_site_allocation

This table correlates storage and backup data to users at the server level. While the acom_id allocates data at the site level, this allows for the allocation of individual or groups of servers to a user.

Column Name	Datatype	Description
user_id	int(4)	User identifier
site_id	int(4)	Site identifier
h_ip_address	varchar(15)	Host IP address
bu_client	varchar(64)	Backup client
bu_master_server	varchar(20)	Backup Master Server
bu_class	varchar(64)	Backup class/policy
start_date	datetime(8)	Last update agg_gmt_timestamp
expire_date	datetime(8)	Expiration agg_gmt_timestamp
timestamp	datetime(8)	Time created

Table 8 – gsa_site_allocation Table

gsa_view_default

The table contains the default view assigned to users through the use of the Management Console's User Wizard. All users are assigned a default view.

Column Name	Datatype	Description
user_id	int(4)	User identifier
view_id	int(4)	View identifier

Table 9 - gsa_view_default

gsa_views

The table contains the views created in the Sun StorageTek Business Analytics application using the Management Console's Views Wizard. There are two types: Composite and Asset.

Column Name	Datatype	Description
view_id	int(4)	View identifier
view_name	varchar(32)	View name
view_description	varchar(255)	Optional view description
view_type	char(1)	A (asset) or C (composite)
created_date	datetime(8)	Date created
created_by	int(1)	User ID of creator
delete_flag	bit(1)	Zero (not deleted); one if deleted
deleted_date	datetime(8)	Date deleted; null if not deleted
deleted_by	int(4)	User ID of user who deleted the view

Table 10 - gsa_views

gsa_user_views

The table links views to the users who have been assigned to them.

Column Name	Datatype	Description
user_id	int(4)	User identifier
view_id	int(4)	View identifier
configuration_date	datetime(8)	Date and time configured
configured_by	int(4)	User ID of user who configured the view

Table 11 - gsa_user_views

gsa_ views_asset_allocation

The table links views to the assets that have been assigned to them.

Column Name	Datatype	Description
view_id	int(4)	View identifier
asset_type	char(1)	Asset type indicator for host, array, tlib, switch, NAS, etc.
asset_id	int(4)	Define a unique asset of a certain asset typ
valid_from	datetime(8)	Timestamp data was entered; may be null
valid_to	datetime(8)	Expiration date of the record; may be null

Table 12 - gsa_user_views

Users

This portal database table contains the users added to the Sun StorageTek Business Analytics application throught the use of the Management Console's Users Wizard. The user, GSMUser, was created during the Central Manager Database Setup.

Column Name	Datatype	Description
user_id	int(4)	Primary key. Unique user ID
OrgID	int(4)	Organization ID
RoleID	int(4)	Role ID
Username	varchar(20)	User name
FName	varchar(30)	First name
MI	char(1)	Middle Initial
LName	varchar(50)	Last Name
Email	varchar(50)	Email address
Phone	varchar(20)	Phone
PSW	varchar(10)	Encrypted password
ASSOCAuth	int(4)	
FirstLogIn	int(4)	
CreatorUserId	int(4)	User ID who created the user
Admin	int(4)	Administrative user flag

Table 13 - Users

Chapter Three – General Tables

This chapter briefly describes general tables, including:

- gsa_agent_version
- gsa_alerts

It also covers some tables associated with the how long data is reported in the Business Analytics reports. The table layout of each table is described.

gsa_agent_version

This table identifies all Smart Agents and identifies their software version. This information provides useful reference for a software inventory application, for example. It is also used to support the Agent Status report in the Management Console.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
port	int(4)	Agent's TCP port number (e.g., 17132 for Host Agent)
agent_name	varchar(255)	Name of Smart Agent
version	varchar(15)	Software version
compile_time	datetime(8)	Date and time compiled
managed_entities	int(4)	Number of managed devices; used for licensing
tz_name	varchar(50)	Name of the agent host's current locale
tz	char(6)	Specifies how many hours from UTC the agent host's current locale is within a range of "-12:00 to +12:00". For example, New Delhi locale will report "tz" as "+5:30".
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp

Column Name	Datatype	Description
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 14 – gsa_agent_version

gsa_alerts

This table identifies alerts that have been forwarded to the specified Local Manager (acom_id) from all deployed smart agents (or other Local Managers). The table is used to support the Agent Alerts report in the Management Console. **Note**: Severity level 0 alerts are logged only after debug level logging is turned on for an agent.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(16)	IP address of agent
port	int(4)	Agent TCP port number
when_occurred	datetime(8)	Alert occurrence timestamp
severity	int(4)	Severity (e.g., 3)
error_id	int(4)	Error Code
progname	varchar(30)	Agent
descr	varchar(200)	Descriptive text on the error
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 15 – gsa_alerts

gsa_config_event_types

This table describes the configuration event types for the Table Purge functionality accessed using the Tools menu of the Management Console.

Column Name	Datatype	Description
event_id	int(4)	Currently always 1 (purge)
event_description	varchar(50)	Is "purge"

Table 16 - gsa_config_event_types

gsa_gsmdb_version

This table contains the Central Manager Database software version information that can be displayed through the Management Console's *About Sun Storagetek Business Analytics* report under the *Help* pulldown menu. It is located in the portal database. The gsmkey column is the primary key.

Column Name	Datatype	Description
gsmkey	int(4)	Product identifier (e.g., 1)
tag	char(50)	Patch level (e.g., p1)
major	int(4)	Major release level (e.g., 4)
minor	int(4)	Minor release level (e.g., 0)
point	int(4)	Point identifier (e.g., 2)
patch	int(4)	Patch number
install_datetime	datetime(8)	Software installation timestamp
action	char(50)	

Table 17 - gsa_gsmdb_version

gsa_grace_periods

The gsa_grace_periods table is the source of the grace period for the expiration date of various data, by table name. The business_grouping column will be used to apply the same grace period across all related tables. All tables have a default grace period of three days with the exception of the SRM tables (367 days).

Column Name	Datatype	Description
gsm_table_name	varchar(30)	Database table name
business_grouping	varchar(30)	backup, nas, host, database, array, fcswitch
grace_period_days	int(4)	Grace period in days

Table 18 – gsa_grace_periods

gsa_homepage_cache_stats

The gsa_homepage_cache_stats table maintains information on the updating of the cache tables associated with the dashboard panes that appear on the Management Console Home Page.

Column Name	Datatype	Description
table_name	varchar(32)	Database table name of the cache table
rows_earlier	numeric 9 (10,0)	Number of rows in the cache table prior to the cache table update
rows_added	numeric 9 (10,0)	Number of rows added to the cache table as a result of the cache table update
cache_update_gmt	datetime(8)	Cache table update timestamp in GMT
process_time_sec	datetime(8)	Processing time for SQL batch job that ran to update the table

Table 19 - gsa_homepage_cache_stats

gsa_last_update_params

This table identifies last update intervals for specified database tables. The *config* column is the primary key.

Column Name	Datatype	Description
config	varchar(30)	Table name (e.g., gsa_host_storage)
hr_interval	int(4)	Last update interval (e.g., 72 hours)

Table 20 – gsa_last_update_params

gsa_purge_tables

This table is used for the Configure Purge Tables function. Configure Purge Tables is accessed from Database Administration under the **Tools** pull-down menu. Refer to the *Administration* chapter for additional information on how you can set up purging rows of specific database table while a "grace period' for maintaining data is observed.

Column Name	Datatype	Description
table_id	int(4)	Internal table identifier
table_name	varchar(30)	Table name
min_day_to_run	int(4)	Minimum number of days to maintain data before it is eligible to be purged
timestamp	datetime(8)	Time collected from agent

Table 21 – gsa_purge_tables

gsa_upgrade_log

This table stores information that pertains to a Central Manager database upgrade installation.

Column Name	Datatype	Description
script_name	varchar(255)	Name of database upgrade installation script
successfu	char(1)	Indicates whether (y/n) the upgrade script completed successfully
exec_time	datetime(8)	How long the script executed

Table 22 - gsa_upgrade_log

Chapter Four – Home Page Cache

This chapter briefly describes tables used to cache data for the Management Console dashboard panes displayed on the home page, including:

- gsa_array_cache
- gsa_db_cache
- gsa_nas_cache
- gsa_backup_cache
- gsa_tlib_cache
- gsa_fabric_cache
- gsa_nas_filesystem_cache
- gsa_tsm_cache

By default, a database batch job runs every four hours to refresh these tables. To manually refresh these tables, the administrator uses the **Refresh Homepage Cache** functionality, which is accessed from Database Administration under Tools. Refer to the Administration chapter to obtain addition information on **Refresh Homepage Cache**.

gsa_array_cache

This table maintains the cached data for the Storage Capacity Allocation Overview dashboard pane. Some storage allocation columns are calculated values.

Column Name	Datatype	Description
site_id	int(4)	Site identifier (e.g., 2000)
site_fullname	char(255)	Site name
array_id	char(64)	Array identifier.
array_alias	char(64)	User-defined alias for the array
sum_RawGB_byArray	numeric 5(9,2)	Sum of raw capacity in GB
sum_HotSpareGB_byArray	Numeric 5(9,2)	Sum of hot spare capacity in GB
sum_ConfiguredRawGB_byArray	Numeric 5(9,2)	Sum of configured raw capacity in GB
sum_UsableGB_byArray	numeric(9,2)	Sum of usable capacity in GB
sum_AvailableGB_byArray	numeric(9,2)	Sum of available capacity in GB
allocatedGB_standard	numeric(9,2)	Allocated capacity for standard volumes
allocatedGB_LocalCopy	numeric(9,2)	Allocated capacity for local copies (e.g., BCVs)
allocatedGB_RemoteCopy	numeric(9,2)	Allocated capacity for remote copies (e.g., RDFs)

Column Name	Datatype	Description
used_percentage	numeric(9,2)	Used percentage

Table 23 -gsa_array_cache

gsa_db_cache

This table maintains the cached data for the Database Management dashboard pane.

Column Name	Datatype	Description
site_fullname	char(255)	Site name
site_id	int(4)	Site identifier (e.g., 2000)
server	char(255)	Server name
port	Numeric 9(18,0)	Port number to connect to the database or instance
database_Name	char(255)	Database name
used_Space	numeric 5(9,2)	Utilized capacity
total_Space	numeric 5(9,2)	Total capacity allocated to the database or instance
percent_Used_Space	numeric 5(9,2)	Percentage of total capacity utilized
instance_name	char(255)	Instance name
database_type	char(255)	Type of database (e.g., Oracle)
sum_UsedGBbydb	numeric(9,2)	Sum of capacity used in GB
sum_GBbydb	numeric(9,2)	Sum of available capacity in GB

gsa_nas_cache

This table maintains the cached data for the NAS Device Overview dashboard pane.

Column Name	Datatype	Description
site_id	int(4)	Site identifier (e.g., 2000)
site_fullname	char(255)	Site name
gsa_id	char(255)	Application-generated unique

		identifier for the NAS device

Column Name	Datatype	Description
nodename	char(255)	Node name
model	char(255)	Model
vendor	char(255)	Manufacturer
nodename_nas	char(255)	NAS system name
total_available_capacity	numeric 5(9,2)	Total capacity available
total_used_capcity	numeric 5(9,2)	Total capacity used
total_snapshot_reserved	numeric 5(9,2)	Total capacity reserved for snapshots
total_snapshot_used	numeric 5(9,2)	Total capacity used by snapshots
total_snapshot	numeric 5(9,2)	Total capacity for snapshots
total_capacity	numeric 5(9,2)	Total capacity for snapshots
percent_Utilization	numeric 5(9,2)	Percentage of total capacity utilized

gsa_backup_cache

This table maintains the cached data for the Backup Status Summary dashboard pane.

Column Name	Datatype	Description
site_id	int(4)	Site identifier (e.g., 2000)
site_fullname	char(255)	Site name
master_server	char(255)	NetBackup master server or Legato NetWorker server
client	char(255)	Backup client
AllFailedClient	int(4)	Number of partial jobs
AllSucceededClient	int(4)	Number of successful jobs for that client
PartiallySucceededClient	int(4)	Number of partially successful jobs for that client

gsa_tlib_cache

This table maintains the cached data for the Tape Library Overview dashboard pane.

Column Name	Datatype	Description
site_id	int(4)	Site identifier (e.g., 2000)
site_fullname	char(255)	Site name
alias	char(255)	Tape library alias
lib_id	char(255)	Unique tape library identifier
lib_index	int(4)	
vendor	char(255)	Library manufacturer
model	char(255)	Device model
free_cells	int(4)	Number of free cells
active_cells	int(4)	Number of active cells
total_cells	int(4)	Number of total cells in the tape library
percent_utilized	int(4)	Percentage of total cells in the tape library utilized
last_update	datetime(8)	Last update agg_gmt_timestamp

gsa_fabric_cache

This table maintains the cached data for the Fabric Utilization Overview dashboard pane.

Column Name	Datatype	Description
site_id	int(4)	Site identifier (e.g., 2000)
site_fullname	char(255)	Site name
switch_wwn	char(255)	Switch World Wide Name (WWN)
switch_name	char(255)	Switch name
switch_alias	char(255)	Switch alias
fabric_name	char(255)	Fabric name
fabric_alias	char(255)	Fabric alias
fabric_wwn	char(255)	Fabric World Wide Name (WWN)
total_ports	int(4)	Total number of ports
used_ports	int(4)	Number of used ports

gsa_nas_filesystem_cache

This table maintains the cached data for the NAS Filesystem Overview dashboard pane.

Column Name	Datatype	Description
filesystem_name	char(255)	File system name
gsa_id	char(255)	Application-generated unique identifier for the NAS device
site_id	int(4)	Site identifier (e.g., 2000)
site_fullname	char(255)	Site name
nodename	char(255)	Node name
model	char(255)	Model
vendor	char(255)	Manufacturer
product_detail	char(255)	Product information
filesystem_type	char(255)	Type of filesystem
logical_device_name	char(255)	The logical device name of the mounted device
total_cap	numeric 5(9,2)	Total capacity (GB)
total_available_cap	numeric 5(9,2)	Total available capacity (GB)
total_used_cap	numeric 5(9,2)	Total used capacity (GB)
total_snapshot_reserved	numeric 5(9,2)	Total capacity (GB) reserved for snapshots
total_snapshot_used	numeric 5(9,2)	Total capacity (GB) for snapshots used
share	int(4)	Number of shares
week	datetime(8)	
used_percentage	numeric 5(9,2)	Percentage used
PercentUtilization	numeric 5(9,2)	
computed_total_capacity	numeric 5(9,2)	Computed total capacity
node_name_nasfs	char(255)	

gsa_host_cache

This table maintains the cached data for the Host Filesystem Utilization dashboard pane.

Column Name	Datatype	Description
site_id	int(4)	Site identifier (e.g., 2000)
nodename	char(255)	Host's node name
date	datetime(8)	Report date timestamp
total_gb_used_node	numeric 5(9,2)	Total capacity (GB) allocated to the node
total_gb_used_node	numeric 5(9,2)	Total capacity (GB) allocated to the node
total_capacity_node_gb	numeric 5(9,2)	Total capacity (GB) of the node
user_capacity_node_gb	numeric 5(9,2)	Total capacity (GB) utilized for file systems
utilized_node_percent	numeric 5(9,2)	Percentage of capacity utilized for file systems
utilized_usable_percent	numeric 5(9,2)	Percentage of usable capacity utilized for file systems
site_fullname	char(255)	Site name

gsa_tsm_cache

This table maintains the cached data for the Host Filesystem Utilization dashboard pane.

Column Name	Datatype	Description
site_id	int(4)	Site identifier (e.g., 2000)
server	char(255)	Server name
nodename	char(255)	Host's node name
site_fullname	char(255)	Site name
completed	numeric 5(9,2)	Number of scheduled events completed
failed	numeric 5(9,2)	Number of scheduled events failed
missed	numeric 5(9,2)	Number of scheduled events missed (or not started)

Chapter Five – Assets

Assets are physical devices that include fabric switches, servers, arrays, and tape libraries. The assets are monitored by the Sun StorageTek Business Analytics agents, and are assigned to one or more asset views. The *View Administration* menus allow the administrator to assign assets to asset views. This chapter describes some database tables that store information used for this functionality. If the agent type (e.g., NAS) is not deployed, the related table (e.g., gsa_asset_nas) will be empty.

The tables that are populated using the *Define Fields for Asset Reports* administrative menus are also covered in this chapter.

gsa_ asset_types

This table identifies the asset types within the Sun StorageTek Business Analytics application.

Column Name	Datatype	Description
asset_type	char(1)	Primary key. Type of asset
asset_description	varchar(20)	Description of asset
asset_table_name	varchar(50)	Name of asset table (e.g., gsa_asset_array)

Table 24 - gas_asset_types

The seed data for asset types is identified below.

asset_type	asset_description	asset_table_name
A	array	gsa_asset_array
B	backup_client_policy	gsa_asset_backup_client_policy
D	databases	gsa_asset_database
F	fabric switches	gsa_asset_switches
H	hosts	gsa_asset_hosts
N	nas devices	gsa_asset_nas
S	site	gsa_site
T	tape library	gsa_asset_tlib

asset_type	asset_description	asset_table_name
V	views	gsa_views

gsa_ asset_reference

The table contains information that is populated using the *Define Fields for Asset Report* functionality of the Management Console application. This functionality is accessed from *Reporting Administration* under the *Tools* pulldown menu.

Column Name	Datatype	Description
asset_type	char(15)	Text field that indicates the type of asset (host, array, tlib, switch, nas, etc.)
field_num	int(4)	System-generated number that identifies a field_type and field_name
field_type	varchar(30)	Defines the type of data stored in the field (number, text, date)
field_name	varchar(64)	User-defined field name
timestamp	datetime(8)	Creation timestamp
to_time	datetime(8)	Expiration timestamp

Table 25 - gsa_asset_reference

gsa_ asset_data

The table contains all user-entered data for an asset.

Column Name	Datatype	Description
asset_type	char(15)	Text field that indicates the type of asset (host, array, tlib, switch, nas, etc.)
site_id	int(4)	Site identifier
dev_id1, dev_id2, dev_id3	varchar(100)	Used to define a unique asset of a particular asset type; one or more columns may be null
field_num	int(4)	System-generated number that identifies a field_type and field_name

Column Name	Datatype	Description
field_value	varchar(255)	User entered field value; may be text, number, or date
timestamp	datetime(8)	Creation timestamp
to_time	datetime(8)	Expiration timestamp

Table 26 - gsa_asset_data

gsa_ asset_array

The table contains information for the asset type of array.

Column Name	Datatype	Description
asset_id	int(4)	Index. Uniquely identifies an asset
site_id	int(4)	Site identifier
array_id	char(32)	Array identifier
array_name	varchar(64)	Array name
array_maker	varchar(20)	Array manufacturer
array_model	varchar(20)	Array model
last_update	datetime(8)	Last update timestamp

Table 27 - gsa_asset_data

gsa_ asset_backup_client_policy

The table contains information for the asset type of backup client policy.

Column Name	Datatype	Description
asset_id	int(4)	Index. Uniquely identifies an asset
site_id	int(4)	Site identifier
ip_address	char(15)	Client IP address
master_server	varchar(132)	Master Server name
client	varchar(128)	Backup client name
policy	varchar(128)	Policy name
last_update	datetime(8)	Last update timestamp

Table 28 - gsa_asset_data

gsa_ asset_database

The table contains information for the asset type of database.

Column Name	Datatype	Description
asset_id	int(4)	Index. Uniquely identifies an asset
site_id	int(4)	Site identifier
instance_name	varchar(64)	Database Server instance name
db_server_ip	varchar(15)	Unique Database Sever Identifier
port_no	int	Database server port number (e.g., 1433 SQL Server)
database_type	varchar(25)	Type of Database: Oracle. Sybase, etc
version	varchar(25)	Database Server version
instance_name	varchar(64)	Database Server instance name
last_update	datetime(8)	Last update timestamp

Table 29 - gsa_asset_database

gsa_ asset_hosts

The table contains information for the asset type of host.

Column Name	Datatype	Description
asset_id	int(4)	Index. Uniquely identifies an asset
site_id	int(4)	Site identifier
nodename	varchar(64)	Host's node name
hostid	varchar(20)	Host's identifier
last_update	datetime(8)	Last update timestamp

Table 30 - gsa_asset_hosts

gsa_ asset_nas

The table contains information for the asset type of NAS.

Column Name	Datatype	Description
asset_id	int(4)	Index. Uniquely identifies an

		asset
gsa_id	char(64)	Application-generated unique identifier for the device
system_id	char(32)	Device system ID
nodename	varchar(64)	Configured name of the device
vendor	char(32)	Manufacturer of the device
product	char(32)	Product name
model	varchar(32)	Device model
last_update	datetime(8)	Last update timestamp

Table 31 - gsa_asset_nas

gsa_ asset_nas_filesystem

The table contains information for the asset type of NAS filesystem.

Column Name	Datatype	Description
asset_id	int(4)	Index. Uniquely identifies an asset
site_id	int(4)	Site identifier
gsa_id	char(64)	Application-generated unque identifier for the device
filesystem_name	varchar(255)	File system name
filesystem_type	char(20)	File system type
nodename	char(255)	Node name
last_update	datetime(8)	Last update timestamp

Table 32 - gsa_asset_nas_filesystem

gsa_ asset_switches

The table contains information for the asset type of switches.

Column Name	Datatype	Description
asset_id	int(4)	Index. Uniquely identifies an asset
site_id	int(4)	Site identifier
switch_wwn	char(16)	Switch World Wide Name
switch_name	varchar(64)	Switch name
vendor_name	char(32)	Switch vendor manufacturer
switch_model	char(32)	Device model

last_update	datetime(8)	Last update timestamp

Table 33 - gsa_asset_switches

gsa_ asset_tlib

The table contains information for the asset type of tape libraries.

Column Name	Datatype	Description
asset_id	int(4)	Index. Uniquely identifies an asset
site_id	int(4)	Site identifier
lib_id	varchar(128)	Unique tape library identifier
lib_index	int(4)	
vendor	varchar(128)	Library manufacturer
model	varchar(64)	Device model
alias	varchar(128)	Alias or null if no alias defined
last_update	datetime(8)	Last update timestamp

Table 34 – gsa_asset_tlib

Chapter Six – Data Polling

The messaging infrastructure allows the scheduled and on-demand collection of agent data that appears in Sun StorageTek Business Analytics reports. Some tables in the chapter are used for Policy Execution or Data Collection. All these user tables are contained in the portal database.

gsa_ dp_data_collection

This table contains the default (seed data) for agent data collection.

Column Name	Datatype	Description
collection_scheme_id	int(4)	Unique collection scheme identifier
collection_type	varchar(32)	Collection Type (e.g., Host) as seen in the Management Console's *Data Polling Schedule* menu under *Tools*.
collection_metric	varchar(32)	Collection Metric (e.g., FileSystem) as seen in the Maangement Console's *Data Polling Schedule* menu under *Tools*.
default_start_time	datetime(8)	Default start time in format mm/dd/yyyy hh/mm/ss AM/PM
default_interval_type	varchar(32)	Type of interval for recurring collection (e.g., hourly)
default_interval	int(4)	Default interval (e.g., 3)
min_collection_interval_type	varchar(32)	Minimum collection interval (e.g., hourly) type
min_collection_interval	int(4)	Minimum interval (e.g., 1)

Table 35 - gsa_dp_data_collection

gsa_ dp_data_collection_obj

This table contains the default timeout used by the Data Aggregator Agent for the collection of requested agent objects.

Column Name	Datatype	Description
collection_scheme_id	int(4)	Unique collection scheme identifier
callback_table	varchar(128)	Table name (e.g., gsa_alerts)
sequence	int(4)	Sequence number
default_timeout	int(4)	Default timeout (e.g., 1200) in seconds

Table 36 - gsa_dp_data_collection_obj

gsa_ data_collection_stats

This table contains data from the Data Aggregator's **gsa_ data_collection_stats** object**.** The Management Console Polling Schedules window allows you to set the frequency of scheduled data collection for the Collection Type of Data Aggregator and Collection Meric of Collection Statistics.

Column Name	Datatype	Description
rid	int(4)	The Routing Agent ID (rid)of the first Routing Agent the data collection requests went through. This field is not found in the gsa_data_collection_stats object
agg_host	char(16)	The IP address of the host where the Data Aggregator is running.
agg_port	int(4)	The TCP port where the gsa_data_collection_stats object is published on.
object_name	varchar(64)	This is the base name of the table that was collected with no version information.
object_version	char(5)	This is the version of the table. If the table does not have a version, the column is NULL. For example, the gsa_some_table-2_1 would contain the table_version 2_1 and the gsa_someother_table would contain a NULL table_version.
session_id	int(4)	The unique identifier for the collection request.
transaction_id	int(4)	This is the transaction id for this request. All requests are assigned a transaction_id. If an alert was generated by this request, the transaction_id can be joined to the alerts table to see the text for the error(s).
data_timeout	int(4)	The timeout value used for this collection.
target_site_id	int(4)	The site_id requested for this collection (if specified, NULL if not specified).
target_rid	int(4)	The rid requested for this collection (if specified, NULL if not specified).
target_host	char(16)	The agent target IP address requested for this collection (if specified, NULL if not specified).
target_port	int(4)	The agent target port requested for this collection (if specified, NULL if not specified).

Column Name	Datatype	Description
data_arrival	datetime(8)	Date/time the agent data was received from the environment (also signifies the start of data insertion).
rows	int(4)	The number of rows returned from the environment.
data_insertion	datetime(8)	Date/time the insertion of this data was completed. If an error occurred during the data request and, therefore, no insertion was attempted, this should be NULL.
errors	int(4)	Count of the errors that occurred during the insertion process.
last_error	int(4)	If *errors* are greater than zero, contains the error string for the last error that occurred.
agt	datetime(8)	GMT date/time originally inserted into the database associated with this record's object_name.
agg_gmt_timestamp	datetime(8)	GMT date/time added by Data Aggregator for the gsa_data_collection_stats table; this is not found in the gsa_data_collection_stats object.

Table 37 - gsa_data_collection_stats

gsa_ jobs

The table contains information on scheduled data collection or policy execution. The sch_job_id column is the primary key.

Column Name	Datatype	Description
sch_job_id	int(4)	Unique scheduled job identifier
sch_job_name	varchar(20)	Data Collection or Execute Policy
sch_job_purpose	varchar(20)	Collect data or execute policy
sch_job_category	varchar(20)	Data collection or policy management
sch_job_owner	int(4)	User ID of creator
sch_job_desc	varchar(20)	Collect Data or Execute Policy

Table 38 - gsa_jobs

gsa_ job_schedule

The table contains information on jobs created for data collection or policy execution. The sch_id and sch_job_id columns are primary keys.

Column Name	Datatype	Description
sch_id	int(4)	Unique schedule identifier
sch_job_id	int(4)	Unique scheduled job identifier
sch_ name	char(15)	Schedule name (e.g., Collect)
sch_type	char(15)	aggregator or policyAgent
sch_state	int(4)	0=disabled; 1=enabled
sch_user_id	int(4)	User ID of creator

Table 39 - gsa_job_schedule

gsa_ job_steps

The table contains information on the discrete actions comprsing the steps within a scheduled job. The sch_step_id and sch_job_id columns are primary keys.

Column Name	Datatype	Description
sch_job_id	int(4)	Unique scheduled job identifier
sch_step_id	int(4)	Unique execution step identifier
sch_ step_name	varchar(20)	Step name (e.g., First Step)
sch_ step_type	varchar(20)	Step type
sch_ step_target	varchar(32)	Step command's target component
sch_ step_command	text(16)	Text of command
sch_ step_params	varchar(128)	Optional command parameters
sch_ step_cond_	varchar(20)	Conditions; may be null

Table 40 - gsa_scheduled_jobs

gsa_ times

The table contains information on the frequencies of job schedules. The sch_id column is the primary key.

Column Name	Datatype	Description
sch_id	int(4)	Unique schedule identifier
sch_ start_time	datetime(8)	Scheule start time in format dd/mm/yy hh/mm/ss (a.m./p.m.)

Column Name	Datatype	Description
sch_ end_time	datetime(8)	Schedule end time in format dd/mm/yy hh/mm/ss (a.m./p.m.)
sch_ start_date	datetime(8)	Scheule start date in format dd/mm/yy hh/mm/ss (a.m. /p.m.)
sch_ end_date	datetime(8)	Schedule end date in format dd/mm/yy hh/mm/ss (a.m./p.m.)
sch_ interval_type	varchar(12)	Interval type (e.g., hourly)
sch_ interval	int(4)	Interval per schedule type
sch_ day_of_week	varchar(50)	Day of week
sch_ week_of_month	char(7)	Week of month
sch_ day_of_month	char(8)	Day of month
sch_ month_of_year	char(12)	Month of year

Table 41 – gsa_times

gsa_ transactions

The table tracks transactions related to polling schedules. The transaction_id column is the primary key.

Column Name	Datatype	Description
transaction_id	int(4)	Unique transaction identifier
transaction_source	varchar(128)	Source of transaction (e.g., Install)
transaction_type	varchar(255)	Transaction type
owner_user_id	int(4)	User ID associated with the transaction
timestamp	datetime(8)	Creation timestamp

Table 42 - gsa_transactions

Chapter Seven – Policy Alerting

Sun StorageTek Business Analytics provides the ability to create and excute policies using the Management Console's Policy Alerting menus. The policies are monitored and executed by the Policy Agent. This chapter describes some tables used for this functionality. All these user tables are contained in the portal database.

gsa_ policy_class_cmd_assetcols

The table contains columns for the different classes of assets (e.g., Host) associated with the commands used for Policy Management.

Column Name	Datatype	Description
policy_class_command_id	int(4)	Unique policy command identifier
asset_col_name	varchar(128)	Asset column name
asset_type	char(2)	Acronym for asset (e.g., F(abric)
sequence	int(4)	Sequence number

Table 43 - gsa_policy_class_cmd_assetcols

gsa_ policy_class_commands

The table contains the SQL commands used to enforce policy management.

Column Name	Datatype	Description
policy_class_command_id	int(4)	Unique policy command identifier
policy_class_ id	int(4)	Unique policy class identifier
command_type	char(10)	Command type (e.g., sql)
command_value	varchar(255)	Stored procedure (e.g., gsa_proc_utilizedisk_sr)

Table 44 - gsa_policy_class_commands

gsa_ policy_class_master

The table contains descriptions of the policies displayed in the Policy Alerting menus of the Management Console.

Column Name	Datatype	Description
policy_class_ id	int(4)	Unique policy class identifier
policy_class_short_name	char(30)	Policy short name (e.g., Host Filesystem Alert)
policy_class_long_name	varchar(255)	Description of the policy

Table 45 - gsa_policy_class_commands

gsa_ policy_class_parameter

The table contains the various parameters used within the various policies defined using the Policy Alerting menus of the Management Console.

Column Name	Datatype	Description
policy_class_ id	int(4)	Unique policy class identifier
policy_class_param_id	int(4)	Unique policy parameter identifier
param_name	varchar(64)	Parameter name (e.g., nodename)
param_desc	varchar(128)	Parameter description (e.g., Host Name)
param_type	char(10)	Parameter type (e.g., input/condition)
param_field_type	char(10)	Field data type (e.g., datetime(8))
policy_default_rule_id	int(4)	Unique default rule identifier

Table 46 - gsa_policy_class_parameter

gsa_ policy_default_rules

The table contains information on the default policy rules.

Column Name	Datatype	Description
policy_default_ rule	int(4)	Unique policy default rule identifier
rule_name	varchar(128)	Rule name (e.g., used_percentage)
rule_desc	varchar(64)	Rule description (e.g., Sort Order)
rule_field_type	char(10)	Field data type (e.g., varchar)

Table 47 - gsa_policy_default_rules

gsa_ policy_instance_master

The table contains information on instances of policies. The policy_instance_id column is the primary key.

Column Name	Datatype	Description
policy_class_ id	int(4)	Unique policy class identifier
policy_class_ id	int(4)	Unique policy class identifier
user_id	int(4)	User identifier
view_id	int(4)	View identifier
enabled	char(1)	Identifies policy enabled status (y/n)
notify_always	char(1)	Identifies policy notify status (y/n); if yes notified even when threshold not exceeded
create_time	datetime(8)	Creation timestamp

Table 48 - gsa_policy_instance_master

gsa_ policy_instance_notify

The table contains information on policy notifications. The policy notifications are sent to specified email recipients.

Column Name	Datatype	Description
policy_instance_ id	int(4)	Unique policy instance identifier
notify_type	char(10)	Notification type; currently always email)
notify_value	varchar(64)	Recipients of notifications (email address)

Table 49 - gsa_policy_instance_notify

gsa_ policy_instance_values

The table contains parameter values related to policies.

Column Name	Datatype	Description
policy_class_ id	int(4)	Unique policy class identifier
policy_class_param_id	int(4)	Unique policy class parameter identifier
param_operator	char(10)	Parameter operator
param_value	varchar(255)	Paramter value

Table 50 - gsa_policy_instance_values

Chapter Eight – Fabric Tables

The Fabric Agent provides one, unified fabric agent for different fabric vendor products and interfaces. See the Sun StorageTek Business Analytics Support Matrix for the latest information on the Fabric Agent. This chapter briefly describes the Fabric Agent tables, including:

gsa_fabric object_types
gsa_abric_ports
gsa_fabric_switch
gsa_fabric_zone
gsa_fabric_ports_perf

gsa_fabric_object_Types

This table conatins information on fabric switch objects.

Column Name	Datatype	Description
object_type	int(4)	Internal object identifier; primary key
type_name	varchar(12)	Name of object type

Table 51 - gsa_fabric_object_types

The metadata loaded at installation time for object_type is listed below.

object_type	type_name
0	invalid
1	port
2	switch
3	hb
4	node
5	device
6	addrunit
7	hba
8	host

object_type	type_name
9	fabric
10	zone
11	zoneset
12	oshandle
13	security
14	enclosure
15	platform
16	bridge
17	route
18	portstats
19	porterrors
20	zone_alias
21	zoningcaps
22	zone_member
23	portmodule
24	fullzonedb
25	activezonedb

Table 52 - Object Type Metadata

gsa_fabric_port_types

This table maintains the the type of switch ports.

Column Name	Datatype	Description
port_type	int(4)	See below. Primary key.
type_short_name	varchar(3)	Abbreviation for type name
type_name	varchar(20)	Description of port type

Table 53 – gsa_fabric_port_types

The metadata for port_type and type_name is listed as follows: 0=unknown, 1=fabric port, 2=public port, 3=expansion port, 4=fabric end port, 5=loop end port, 6=B port, 7=generic port, 8=U port, 9=other.

gsa_fabric_ports

This table provides a list of the ports in the fabric. The table is populated with the WWN of the fabric name server as well as the WWNs of the individual switch ports.

The port status is either online or offline.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
domain	int(4)	Switch domain identifier
port	int(4)	Port number
sw_port_id	char(6)	Switch Port ID
fabric_wwn	char(16)	WWN of fabric name server
port_wwn	char(16)	Switch port WWN
port_state	int(4)	On-Line or Off-Line indicator
port_type	int(4)	Port type
current_speed_mbits_sec	int(4)	Current port speed (mbits)
att_port_id	char(10)	Attached Port ID
att_port_wwn	char(16)	Attached Port WWN
att_node_wwn	char(16)	Attached node's WWN
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 54 – gsa_fabric_port

gsa_fabric_port_perf

This table maintains the fabric switch port-level performance data that has been collected from fabric switches.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	Agent host IP address
switch_wwn	char(16)	WWN of fabric switch
port_wwn	char(16)	WWN of switch port
att_port_wwn	char(16)	Attached node's port's WWN
att_node_wwn	char(16)	Attached node's WWN
report_interval_sec	int(4)	
sample_interval_sec	int(4)	
cnt_errors	bigint(8)	Port error counter
cnt_busy	bigint(8)	Port busy counter
rx_frames_per_sec	bigint(8)	Received frames per second
tx_frames_per_sec	bigint(8)	Transmitted frames per second
rx_bytes_per_sec	bigint(8)	Received bytes per second
tx_bytes_per_sec	bigint(8)	Transmitted bytes per second
rx_peak_bytes_per_sec	bigint(8)	Peak received bytes per second
tx_peak_bytes_per_sec	bigint(8)	Peak transmitted bytes per second
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 55 – gsa_fabric_port_perf

gsa_fabric_status_types

This table maintains the the status of fabrics.

Column Name	Datatype	Description
oper_status	int(4)	See below. Primary key.
status_name	varchar(16)	Status text string

Table 56 – gsa_fabric_status_types

The status_name values are as follows: 0=unknown, 1=functional, 2=not available, 3=under testing, 4=defective.

gsa_fabric_sw_status_types

This table maintains the the status of fabrics.

Column Name	Datatype	Description
status	int(4)	See below. Primary key.

status_name	varchar(16)	Status text string

Table 57 – gsa_fabric_status_types

The status_name values are as follows: 1=unknown, 2=Online, 3=Offline

gsa–fabric_switch

This table is populated with detailed information on the specified fabric switch. All IP Address fields are populated with a default value of 0.0.0.0.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
fabric_wwn	char(16)	WWN of the fabric name server
switch_name	varchar(64)	Switch name
data_ip_address	char(15)	
mgt_ip_address	char(15)	Management interface IP address
dev_ip_address1	char(15)	Secondary Management IP address
dev_ip_address2	char(15)	Tertiary Management IP address
firmware	varchar(64)	Firmware version
vendor_name	char(32)	Switch vendor name (e.g., McData)
switch_model	char(32)	Model
switch_role	int(4)	Switch role in fabric
switch_state	int(4)	Numeric representation of the state of the switch
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 58 – gsa_fabric_switch

gsa_fabric_zone

This table is populated with detailed information on the specified zones and active zone set. Refer to the current release of the Business Analytics Support Matrix to determine the fabric products and product interfaces that support collection of zone details.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
z_type	int(4)	Zone type identifier
z_name	varchar(64)	Zone name
member_type	int(4)	Type of connected device identifier
member_name	varchar(64)	Connected device name
effective	int(4)	Zone in effect indicator
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 59 – gsa_fabric_zone

Chapter Nine - Array Tables

Sun StorageTek Business Analytics provides storage array agents supporting different vendor product lines or interfaces; including EMC Symmetrix, EMC Clariion, HDS 9200 and 9500 series, HP/Compaq EVA, HP/Compaq HSG80, IBM ESS/Shark, LSI, HP XP, and HiCommand. This chapter describes the storage array tables populated by these agents, including:

- gsa_array_config_v2
- gsa_cache_perf
- gsa_disk_ctl_perf
- gsa_fctl_perf
- gsa_HBA_config_v2
- gsa host_storage_unit_v2
- gsa local_unit_mapping_v2
- gsa phy_disk_v2
- gsa remote_unit_mapping_v2

gsa_array_config_v2

This table contains information on a storage array, including the name, manufacturer, model, cache size, physical disks, and controllers.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
array_id	char(32)	Array identifier
array_name	varchar(64)	Array name
array_maker	varchar(20)	Array manufacturer
array_model	varchar(20)	Array model
array_sw	varchar(20)	Firmware revision
product_line	varchar(20)	Distinquishes between product lines from same manufacturer, such as EMC Symmetrix and EMC Clariion
agent_name	varchar(20)	Identifies the agent that reported the data
cache_size	int(4)	Cache size (MB)
phydisks	int(4)	Number of disks
controllers	int(4)	Number of controllers
mgt_ip_address	char(15)	Device Management IP address. Default is 0.0.0.0
data_ip_address	char(15)	See above
dev_ip_address1	char(15)	Controller IP. Default is 0.0.0.0
dev_ip_address2	char(15)	Controller IP. Default is 0.0.0.0

Column Name	Datatype	Description
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 60 – gsa_array_config_v2

gsa_cache_perf

This table provides information on the cache performance of a specified storage array. The *Sun StorageTek Business Analytics Agent Quick Fact Sheet* identifies the array agents that support the collection of performance details.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
array_id	char(32)	Array identifier
cache_hits_sec	numeric(13) (20,0)	Number of cache hits per second for all I/O
cache_misses_sec	numeric(13) (20,0)	Number of cache misses per second for all I/O
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 61 – gsa_cache_perf

gsa_disk_perf

This table provides information on the disk I/O performance of a specified storage array. The Sun StorageTek Business Analytics Agent Quick Fact Sheet identifies the array agents that support the collection of performance details.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
addr_1	varchar(20)	Disk adapter address(e.g., 16A)
addr_2	varchar(20)	Disk adapter address
addr_3	varchar(20)	Disk adapter address
Column Name	**Datatype**	**Description**

io_per_sec	numeric(13) (20,0)	I/O per second
rd_io_per_sec	numeric(13) (20,0)	Average number of read operations per second for each physical disk
wr_io_per_sec	numeric(13) (20,0)	Average number of write operations per second for each physical disk
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 62 – gsa_disk_perf

gsa_fctrl_perf

This table provides I/O performance statistics (io_per_sec) related to the front-end processor of a specified (array_id) storage array. The Sun StorageTek Business Analytics Agent Quick Fact Sheet identifies the array agents that support the collection of performance details.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
array_id	char(32)	Array identifier
addr_1	varchar(20)	Front end adapter address
io_per_sec	numeric(13) (20,0)	Average I/O per second
rd_io_per_sec	numeric(13) (20,0)	Average number of read operations per second received by the controller
wr_io_per_sec	numeric(13) (20,0)	Average number of write operations per second received by the controller
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 63 – gsa_fctr_perf

gsa_local_unit_mapping_v2

This table maps the local storage unit (lun/hyper/unit) to the units on the local array that protects the data. For example, BCVs in an EMC array or Snapview in an HSG80 Compaq array use this mapping.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
array_id	char(32)	Array identifier
su_id	varchar(255)	Unique volume ID of source volume
d_su_id	varchar(255)	Unique volume ID of destination (snapshot) volume
d_array_id	varchar(20)	Destination array ID
session_name	char(64)	Name associated with particular local copy relationship
mapping_type	char(20)	
mapping_status	char(20)	Status of local copy (active, inactive, offline, failed)
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp

Table 64 – gsa_logical_unit_mapping_v2

gsa_phydisk_v2

This table identifies a physical disk in a managed storage array, including the Local Manager that collected the data, the storage array, and its capacity.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
array_id	char(32)	Storage array identifier
disk_size	varchar(20)	Disk size
addr_1	varchar(255)	Agent/array first unique ID of disk (e.g., cabinet)
addr_2	char(20)	Agent/array second unique ID of disk (disk name)
addr_3	int(4)	Agent/array third unique ID of disk
disk_size	int(4)	Numeric size of the disk (MB)
timestamp	datetime(8)	Time collected from agent

Column Name	Datatype	Description
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 65 – gsa_phy_disk_v2

gsa_remote_unit_mapping_v2

For the remote mapping information, two tables are used. This is necessary as the agent only retrieves information about the local array. The actual mapping between arrays is accomplished at the database level. The two tables are:

- gsa_remote_unit_mapping - For each LUN, this table stores the unique identifier of the lun it is mapped to.
- gsa_su_reference_mapping - This table is discussed later.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
array_id	varchar(20)	Array identifier
su_id	varchar(20)	Unique volume ID of source volume
d_su_id	varchar(255)	Unique volume ID of destination volume
session_name	char(20)	Name associated with the remote copy
mapping_type	char(20)	
mapping_status	char(20)	Status of remote copy (e.g., active)
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 66 – gsa_remote_unit_mapping

gsa_storage_unit_config_v2

This table identifies each storage unit configuration within the storage array.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
array_id	char(32)	Array identifier

Column Name	Datatype	Description
su_id	varchar(20)	Agent/array-specific, unique persistent identifier of storage unit(or volume, or logical unit) within the array
addr1	varchar(200)	Agent/array-specific first unique identifier of disk containing all or part of storage unit
addr2	char(20)	Agent/array-specific second unique identifier of disk containing all or part of storage unit
addr3	int(4)	Agent/array-specific third unique identifier of disk containing all or part of storage unit; -1 means not applicable
addr4	int(4)	Agent/array-specific fourth unique identifier used to identify a particular section or slice of this disk; -1 means not applicable
size	int(4)	Raw size in MB
configuration	varchar(64)	Agent/array-specific identifier for the volume configuration
type	char(20)	The type of this storage unit, such as Volume, Hot Spare, or Free.
status	char(20)	Status of the particular slice
primary_su	varchar(2)	Indicator of how much of the raw capacity of this disk section will be counted in computing the total usable capacity of the storage unit; assigned according to RAID type
component_1	varchar(64)	Represents a second level of intermediate storage from which the storage unit is constructed. For example, a RAID 1 mirror set underlying a RAID 0 stripe set for Storageworks. Default value is N/A (not applicable).
component_2	varchar(64)	Represents an intermediate storage container from which the storage unit is constructed. For example, an EMC meta member or a RAID group. Default value is N/A (not applicable).
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp

Column Name	Datatype	Description
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 67 – gsa_storage_unit_config_v2

gsa_su_reference_config_v2

This table will store the unique identifier for each LUN in the array. At the database level, it can be used to cross reference information to find the remote lun id and site_id. This table is only populated if Sun StorageTek Business Analytics knows the LUN is a member of a remote pair.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
array_id	char(32)	Array identifier
su_id	varchar(255)	Agent/array-specific, unique persistent identifier of storage unit(or volume, or logical unit) within the array
su_uid	varchar(255)	Agent/array-specific, unique persistent identifier of storage unit(or volume, or logical unit) within the remote array
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 68 – gsa_su_reference_config_v2

gsa_array_ HBA_config_v2

This configuration table is used to store local mapping information for retrieved HBA configurations.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of Local Manager
array_id	char(32)	Array identifier
vendor	char(20)	Manufacturer

array_model	char(32)	Array model
version	varchar(64)	
Column Name	**Datatype**	**Description**
wwn	char(20)	HBA WWN
port_wwn	char(20)	Front-end controller World Wide Port Name
port_id	char(20)	Unique, persistent name identifier for the controller and port
type	int(4)	Indicates port type. Is populated with -1 for older agents not publishing the column.
mode	char(20)	Indicates operating mode of port (Fabric, FC-AL, Point-to-point, Unknown. Is populated with Unknown for older agents not publishing the column.
security	char(10)	Security setting on port (LUN, Port, Off, N/A, Unknown).
current_speed_mbits_sec	int(4)	Current port speed in mbits per second
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last date agent checked array configuration changed
to_time	datetime(8)	Last date this configuration was valid
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 69– gsa_array_HBA_config_v2

gsa_host_storage_unit_v2

This table represents the mapping of storage units (volumes) to host ports via specific controller paths.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
array_id	char(32)	Array identifier
wwn_alias	varchar(64)	WWN alias (if defined using the Management Console)
wwn_id	varchar(64)	For a volume assignment with LUN Security, represents the WWN of the host port; may be null indicating the volume is not assigned a specific WWN (e.g., direct-attached SCSI)

Column Name	Datatype	Description
su_id	varchar(255)	Agent/array-specific, unique persistent identifier of storage unit (or volume, or logical unit) within the array
fe_port	varchar(20)	Front end controller port through which this su_id is assigned; may be null if su_id is mapped but not assigned
mapped	int(4)	Value of 1 indicates the su_id mapped to the front end controller port
assigned	int(4)	Value of 1 indicates the su_id is assigned; 0 indicates not assigned and -1 specifies an error
scsi_vbus	int(4)	Indicates a "virtual bus number" (if applicable)
scsi_target	int(4)	Indicates the SCSI target number for a SCSI port
scsi_lun	int(4)	SCSI LUN and host path combination
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 70 - host_storage_unit

gsa_daily_storage_allocation

This table contains information about storage allocated to hosts.

Column Name	Datatype	Description
site_id	int(4)	Site identifier
array_id	char(32)	Array identifier
array_name	varchar(64)	Array name
array_maker	varchar(20)	Array manufacturer

Column Name	Datatype	Description
array_model	varchar(20)	Array model
su_id	varchar(255)	Agent/array-specific, unique persistent identifier of storage unit (or volume, or logical unit) within the array
configuration	varchar(20)	Agent/array-specific identifier for the volume configuration (e.g., 2-Way Mir(ror)
raw_size	int(4)	Raw size in MB
usable_size	int(4)	Usable capacity in MB
spindle_count	int(4)	Number of spindles
host	char(15)	Host name/host ID/Unassigned
ip_address	char(15)	IP address (typically null)
host_id	char(20)	Host identifier (typically null)
host_site	int(4)	Host's site identifier
user_id	int(4)	Matches site identifier (typically null)
mapped_site_id	int(4)	Site ID of mapped volume
mapped_array_id	int(4)	Array ID of mapped volume
mapped_su_id	int(4)	Mapped, agent/array-specific, unique persistent identifier of storage unit (or volume, or logical unit) within the array
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 71 – gsa_daily_storage_allocation

Chapter Ten – Configuration Tables

This chapter briefly describes configuration tables, including:

- gsa_alias
- gsa_bcv_alias
- gsa_config_event_types
- gsa_config_table
- gsa_manual_array_port_to-host

The table columns for each table are described.

gsa_alias

This table contains aliases assigned to switches, fabrics, and storage arrays. An alias provides a more convenient method to identify one of these components in a management report, when compared to viewing its World Wide Name, for example.

The Sun StorageTek Business Analytics administrator uses the Maintain Aliases functionality (see also the *Administration* chapter) to add, modify, or delete aliases.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
alias_type	int(4)	Numeric identifier for alias type (e.g., Fabric WWN)
id	varchar(32)	Identifies what was aliased (e.g., Array ID)
alias	varchar(128)	Is the alias

Table 72 – gsa_alias Table

gsa_bcv_alias

This table tracks the true owner of BCV (EMC Business Continuance Volume) backup copies. This is necessary since all the BCV backups get assigned to the master/media server.

Column Name	Datatype	Description
user_id	int(4)	User
site_id	int(4)	Site identifier
bu_client	varchar(64)	Backup client
bu_class	varchar(64)	Class name defined on Master Serverbbb
bu_master_server	varchar(20)	Master Server name
bcv_alias	varchar(64)	Alias

Table 73 - bcv_alias Table

gsa_config_event_types

This table tracks the configuration events for purging table data. Currently, the only type of configuration event is purge.

Column Name	Datatype	Description
event_id	int(4)	Event identifier
event_desc	varchar(50)	Configuration event

Table 74 – gsa_config_event_types

gsa_config_table

This table contains purge data configuration details.

Column Name	Datatype	Description
entry_id	int(4)	Database insert identifier
table_id	int(4)	Table identifier
event_id	int(4)	Event identifier
retention_day	int(4)	Number of retention days
timestamp	datetime(8)	Time collected from agent

Table 75 – gsa_config_table

gsa_manual_array_port_to_host

This table is used to store a manual mapping of a volume to a host. The Management Console's administrative function, Manual Volume to Host Allocation, populates this table.

Column Name	Datatype	Description
mhmp_id	numeric(9)	Manual host mapping ID
acom_ID	char(15)	Local Manager ID
ip_address	char(15)	IP address of agent
nodename	varchar(20)	Host's node name
hostid	varchar(20)	Host's identifier
host_WWPN	varchar(20)	Host HBA WWPN
array_port_id	varchar(20)	Array' port's WWPN
array_id	varchar(20)	Array identifier

Column Name	Datatype	Description
from_time	datetime(8)	Creation timestamp
to_time	datetime(8)	Expiration timestamp

Table 76 - manual_array_port_to_host Table

Chapter Eleven – Host Tables

This chapter describes tables related to host servers. The Host Agent and/or Remote Host Agent populate these tables. However, the Remote Host Agent currently does not collect Host Bus Adapter (HBA) information.

gsa_homepage_capacity_cache

The table stores data that appears on the Management Console Home Page.

Column Name	Datatype	Description
company	varchar(64)	Company name
site_id	int(4)	Site identifier
site_fullname	varchar(128)	Site name
array_id	char(32)	Array identifier
host	varchar(128)	Host name allocated storage from the specified array
configuration	varchar(20)	Volume configuration
hostConfigSize	int(4)	Disk capacity utilized
hostConfigVolume	int(4)	Volume identifier
array_name	varchar(20)	Storage array name
array_maker	varchar(20)	Array manufacturer
array_model	varchar(20)	Storage array model
rdate	datetime(8)	Last read timestamp
customer_name	varchar(255)	Not used
array_total	numeric 9 (18,0)	Total capacity (GB) of the array

Table 77 – gsa_homepage_capacity_cache

gsa_host_interfaces

This table stores information on the host's IP network interfaces.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
nodename	varchar(64)	Node name
hostid	char(20)	Host identifier
interface_name	varchar(255)	Interface name (e.g., Local Area Connection)
mac_address	char(20)	MAC address of Ethernet adapter
interface_ip	char(15)	Host's IP address (IPV4)
interface_ip_name	varchar(255)	Interface IP name (often NULL)
subnet_mask	char(15)	Subnet mask
default_gateway	char(15)	IP address of default gateway
interface_status	char(15)	UP/DOWN
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 78 – gsa_host_interfaces

gsa_HBA_config

This table stores information on the Host Bus Adapter(s) installed in a particular host server and its switch port connection(s).

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
nodename	varchar(64)	Node name
hostid	char(20)	Host identifier
api_version	int(4)	The HBA API running on the adapter
vendor	varchar(128)	Manufacturer (e.g., Emulex)

model	varchar(20)	HBA model (e.g., LP8000)

Column Name	Datatype	Description
serial_num	varchar(64)	Information in the 'SerialNumber' field from the HBA API
port_num	int(4)	HBA port number; -1 if unknown
version	char(64)	Firmware version
wwn	char(20)	HBA World Wide Name
port_id	char(20)	WWPN
firmware_version	varchar(64)	Information in the 'FirmwareVersion' field from the HBA API.
port_fcid	char(20)	HBA's 6 varcharacter hex fabric port ID if the HBA is in fabric mode, or the 2 varcharacter Arbitrated Loop address if in Loop mode
port_type	char(20)	The mode the HBA/driver is in (i.e. fabric, N_Port, point-to-point, Arbitrated Loop, L_Port, etc…)
effective_speed	char(32)	Effective speed at which the HBA is currently operating
max_speed	char(32)	Maximum supported operating speed of the HBA
link_status	char(32)	Current link state from the 'PortState' field of the HBA API (
fabric_wwn	char(20)	World Wide Name of the fabric the HBA is connected to
ctrl_instance	char(10)	The instance name for this HBA (i.e. fca-pci0 [Solaris], lpfc1 [Solaris], etc…); -may be empty string
ctrl_num	int(4)	Controller number this HBA is viewed as on the system (i.e. c1t0d5=1 [Solaris], c3t2d1=3 [Solaris], etc…).
hardware_path	varchar(128)	The hardware path of the HBA on the system (i.e. /devices/pci@1f,0/pci@1,1/fibre-channel@3 [Solaris])
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 79 – gsa_HBA_config

gsa_host_config

This table identities a host server's operating system, IP address, Operating system version, manufacturer. The information can be used for hardware inventory control, planning of hardware upgrades, and hardware acquisition decisions.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
nodename	varchar(20)	Node name
host_id	char(20)	Host identifier
osname	char(20)	Operating system (e.g., IBM AIX 4.2)
vendorname	varchar(64)	Host vendor
model	varchar(64)	Host model
version_num	varchar(64)	OS version (e.g., Service Pack 4)
release_level	char(20)	Kernel path
numcpus	int(4)	Number of CPUs
memory	numeric(13)	Numeric amount of memory/cache
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 80 – gsa_host_config

gsa_host_filesystem

This table is populated with information that allows monitoring to what extent various file systems are utilizing their physical disk.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	Server IP address
nodename	varchar(64)	Node name
hostid	char(20)	Host identifier
device	varchar(255)	Disk used for file system (e.g., /dev/hd4)
filesystem_name	varchar(255)	Mount point for the filesystem (e.g., /home)
filesystem_type	varchar(20)	Type of file system (e.g., ufs)
blocksize	int(4)	Size, in bytes, of a block
total_blocks	numeric(13)	Total number of blocks in the filesystem including both reserved and non-reserved blocks

Column Name	Datatype	Description
blocks_used	numeric(13)	Total number of blocks allocated to existing files and directories in the filesystem
blocks_available	numeric(13)	Total number of blocks in the filesystem available for creation of new files by non-super users
total_files	numeric(13)	Total number of addressable structures (i.e. inodes in UNIX) in the filesystem
files_used	numeric(13)	Number of addressable structures allocated to existing files and directories in the filesystem
files_available	numeric(13)	Number of addressable structures in the filesystem available for creation of new files by non-super users
filesystemid	numeric(13)	File system identifier
lvm	varchar(20)	Logical Volume Manager
logical_device_group	varchar(64)	Logical device group the mounted device is a member of
logical_device_name	varchar(64)	Logical device name of the mounted device
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 81 – gsa_host_filesystem

gsa_logical_volume_config

This table is designed to describe all the logical devices currently configured on a host. This includes logical characteristics of physical devices (i.e. capacity).

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	Server IP address
nodename	varchar(20)	Host's node name
hostid	char(20)	Host's host id
lvm	varchar(20)	Logical Volume Manager

Column Name	Datatype	Description
logical_device_group	varchar(20)	Logical device group the mounted device is a member of
logical_device_name	varchar(20)	Logical device name of the mounted device
device_layout	varchar(20)	Predetermined set of values that specifies the aggregate layout of the device being reported. SIMPLE CONCAT RAID0 RAID1 SIMPLE or CONCAT RAID5 RAID0+1 RAID1+0
capacity	int(4)	The total capacity of the device being reported
blocksize	int(4)	Size, in bytes, of each block of the device
logical_device_status	varchar(20)	Status of the device being reported
logical_device_group	varchar(20)	Logical device group the mounted device is a member of
logical_device_name	varchar(20)	Logical device name of the mounted device
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 82 – gsa_logical_volume_config

gsa_logical_volume_relation

This table is designed to describe the relationship between logical devices found in the gsa_logicalvolume_config table. Devices are shown in this table as "using" a particular device, meaning this will describe a "top-down" dependency relationship between

devices. A "bottom-up" relationship can be derived from relating the columns in reverse. Below are descriptions of each column in the table.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of the agent
nodename	varchar(20)	Host's node name
hostid	char(20)	Host's host id
lvm	varchar(15)	The lvm for a device used by the device described by the lvm, logical_device_group and logical_device_name columns
logical_device_group	varchar(64)	Logical_device_group for a device used by the device described by the lvm, logical_device_group and logical_device_name columns
logical_device_name	varchar(64)	Logical_device_name for a device used by the device described by the lvm, logical_device_group and logical_device_name columns.
uses_logical_device_group	varchar(64)	Associated logical device group; may be N/A
uses_logical_device_name	varchar(64)	Associated logical device name (e.g., Harddisk0)
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 83 – gsa_logical_volume_relation

gsa_physicalvolume_config

This table is designed to describe the physical characteristics of all the physical disk devices currently visible to a host. These are devices from a global perspective, meaning that if a host is presented multiple paths to the same device from a storage array, there should only be one entry in this table for that device.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	Server IP address
nodename	varchar(20)	Host's node name
hostid	varchar(20)	Host's host id
physical_device_name	varchar(64)	Unique physical system device (i.e. c1t0d5 [Solaris]) and represents the entire device
vendor	char(32)	Information found in the 'Vendor' field from iostat output
product	char(32)	Information found in the 'Product' field from iostat output
serial_num	char(32)	Information found in the 'Serial No' field from iostat output
volume_id	char(32)	Unique volume id for the device
arrayid	char(20)	Unique id for the array supplying the device
physical_device_status	varchar(20)	Status of the physical device
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 84 – gsa_physicalvolume_config

gsa_physicalvolume_path

This table is designed to describe the information about the physical volume path, including name and physical location information, including controller, SCSI ID and LUN identification.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
nodename	varchar(20)	Host's node name
hostid	char(20)	Host's host id
physical_device_name	varchar(64)	Unique physical system device (i.e. c1t0d5 [Solaris]) and represents the entire device
path_device_name	varchar(64)	Host device name of the path this row in the table is pertaining
ctlr_instance	varchar(20)	HBA instance as referenced by the host
ctlr_num	int(4)	Controller number associated with the path used to access the device
channel	int(4)	SCSI channel the device is being accessed through
target	int(4)	SCSI target the device is being accessed through
lun	int(4)	SCSI lun the device is being accessed through
array_wwpn	varchar(20)	World Wide Port Name of the array port that is providing this device
path_status	varchar(20)	Status of the path being reported
path_software_name	varchar(20)	What pathing software (if any) is being used to access this device
path_software_version	varchar(20)	The pathing software version (if any) that is being used to access this device
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 85 - -gsa_physicalvolume_path

gsa_host_netshares

This table is designed to describe all the host's network shares.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	Server IP address
nodename	varchar(64)	Host's node name
hostid	char(20)	Host's host id
share_name	varchar(255)	Share name
share_type	char(16)	CIFS/NFS
share_path	varchar(255)	Directory path of share (e.g., C:\WINNT)
file_system_name	varchar(255)	Typically N/A
options	varchar(255)	List of options (e.g., Max. uses)
timestamp	datetime(8)	Time collected from agent
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 86 – gsa_host_netshares

gsa_host_fs_size_daily

This table stores the host's allocated storage on a daily basis.

Column Name	Datatype	Description
site_id	int(4)	Site identifier
ip_address	char(15)	Server IP address
nodename	varchar(64)	Host's node name
hostid	char(20)	Host's host id
gb_used	numeric(13)	Storage allocated (GB)
user_id	int(4)	Matches site_id
timestamp	datetime(8)	Date/time collected from agent
agg_gmt_date_only	datetime(8)	Date (month/day/year)
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 87 – gsa_host_fs_size_daily

gsa_filesystem_forecast

This table is used for the capacity forecasting report's section on file systems.

Column Name	Datatype	Description
site_id	int(4)	Site identifier
nodename	varchar(120)	Host name
perctUsed	real(4)	Percentage used
TotalGB	real(4)	Total file system capacity in GB
UsedGB	real(4)	Consumed file system capacity in GB
date	datetime(8)	Date timestamp

Table 88 – gsa_filesystem_forecast

gsa_filesystem_limit

This table stores file system usage restrictions.

Column Name	Datatype	Description
ip_address	varchar(15)	IP address of host agent
filesystem_name	varchar(20)	File system name
usage_limit	float(8)	Usage limit

Table 89 – gsa_filesystem_limit

Chapter Twelve – SRM Tables

This chapter briefly describes tables related to the Storage Resource Management (SRM) Agent functionality, including:

gsa_srm_filesystem
gsa_srm_mount_points
gsa_srm_usage_factors
gsa_srm_filesystem_consumers
gsa_srm_largest_files
gsa_srm_largest_old_files
gsa_srm_user
gsa_srm_size_distribution
gsa_srm_type_distribution
gsa_srm_temporary_directories
gsa_usage_details

gsa_srm_filesystem

This table lists all filesystems on the host, which is identified by host_id.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
nodename	varchar(64)	DNS name of the host
host_id	char(20)	Unique ID (automatically generated by the agent) for the host
filesystem_id	numeric(13)	Unique ID (automatically generated by the agent) for the file system (matches the filesystem_id generated by hostAgent.gsa_host_filesystem table)
filesystem_type	varchar(20)	File system type (e.g., NTFS)
filesystem_attributes	int(4)	A bitmap of attributes (e.g. local/remote,read-only/read-write,shared-by-cluster-node/private,clean/dirty,compressed/uncompressed,encrypted/unencrypted etc.)
block_size	numeric(13)	Size of basic file system allocation unit in bytes (e.g. cluster size in NTFS, block size in UFS)
total_capacity	numeric(13)	Total capacity of filesystem in bytes (which is multiple of block size)
used_capacity	numeric(13)	Used capacity of filesystem in bytes (which is mulitple of block_size)
file_count	numeric(13)	Number of files on the file system
dir_count	numeric(13)	Number of directories on the file system
average_file_size	numeric(13)	Average file size on the system. Unit bytes per file (and not blocks per file).

Column Name	Datatype	Description
median_file_size	numeric(13)	Median file size on the system. Unit bytes per file (and not blocks per file)
user_data_size	numeric(13)	Bytes used for storing actual user data (contents of files). Summation of actual file size (in bytes) of all files on the system
metadata_size	numeric(13)	Bytes used (not blocks) for storing the metadata (includes storage required for file system data structures like boot record, inode/cluster allocaiton table, directory data etc.)
block_size_overhead	numeric(13)	Space wasted in bytes because of internal fragementation. For every file, the last allocated block may not be completely filled up, leading to internal fragmentation
last_scan_time	datetime(8)	Scanner time stamp
timestamp	datetime(8)	Timestamp when the data was published.
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 90 – gsa_filesystem

gsa_srm_mount_points

This table maintains the mount points for file systems.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
nodename	varchar(64)	DNS name of the host
hostid	varchar(20)	Unique ID (automatically generated by the agent) for the host
filesystem_id	numeric(13)	Unique ID (automatically generated by the agent) for the file system (matches the filesystem_id generated by hostAgent.gsa_host_filesystem table)
mount_point	varchar(64)	Mount point for this volume
last_scan_time	datetime(8)	Scanner time stamp

Column Name	Datatype	Description

timestamp	datetime(8)	Timestamp when the data was published.
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 91 – gsa_srm_mount_points

gsa_srm_usage_factors

This table stores information on per file system usage factors (access factor, modification factor, creation factor etc.).

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
nodename	varchar(64)	DNS name of the host
hostid	char(15)	Unique ID (automatically generated by the agent) for the host
filesystem_id	int(4)	Unique ID (automatically generated by the agent) for the file system (matches the filesystem_id generated by hostAgent.gsa_host_filesystem table)
factor_type	varchar(128)	Type of usage factor (e.g., modification)
time_span_type	varchar(20)	Unit of the time span (e.g. year, month, day etc.)
time_span	int(4)	Duration for which the factor is being reported (unit of this duration is given by time_span_type)
userdata_factor_...	numeric(9)	Factor value in percentage (range: 0 - 100 %)
filecount_factor_...	numeric(9)	Factor value in percentage (range: 0 - 100 %)
last_scan_time	datetime(8)	Scanner time stamp
timestamp	datetime(8)	Timestamp when the data was published.
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation_agg_gmt_timestamp

Table 92 – gsa_srm_usage_factors

gsa_srm_usage_details

This table is used within the new email archive, unauthorized files, and user-defined specific file filter functionality of the SRM Agent Configuration and reports.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager identifier
ip_address	char(15)	IP address of agent
nodename	varchar(64)	DNS name of the host
hostid	char(20)	Unique ID (automatically generated by the agent) for the host
filesystem_id	int(4)	Unique ID (automatically generated by the agent) for the file system (matches the filesystem_id generated by hostAgent.gsa_host_filesystem table)
resource_name	varchar(255)	Resource name
extension_name	varchar(255)	File ststem extension
resource_type	varchar(20)	Resource type
owner	varchar(255)	Filesystem owner
file_timestamp	datetime(8)	File timestamp
size	numeric(13)	Actual file size (in bytes, not allocation blocks)
filter_name	varchar(255)	Filer name
last_scan_time	datetime(8)	Scanner time stamp
access_time	datetime(8)	File last accessed timestamp
creation_time	datetime(8)	File creation timestamp
timestamp	datetime(8)	Timestamp when the data was published.
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation_agg_gmt_timestamp

Table 93 - gsa_usage_details

gsa_srm_filesystem_consumers

This table stores information on file system usage, which is broken down into usage per consumer (i.e., user who owns files on that file system).

Column Name	Datatype	Description
acom_id	int(4)	Local Manager identifier
ip_address	char(15)	IP address of agent
nodename	varchar(64)	DNS name of the host
hostid	varchar(20)	Unique ID (automatically generated by the agent) for the host
filesystem_id	numeric(13)	Unique ID (automatically generated by the agent) for the file system (matches the filesystem_id generated by hostAgent.gsa_host_filesystem table)
owner	varchar(255)	Identifies the srm_user_id
consumed_blocks	numeric(13)	Identifies the allocated space (in number of blocks) used up by the files (and dirs) for this user (identified by owner srm_user_id)
consumed_space	numeric(13)	Shows the bytes consumed by the files (not metadata) created by this user on this filesystem
last_scan_time	datetime(8)	Scanner time stamp
timestamp	datetime(8)	Timestamp when the data was published.
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 94 – gsa_srm_filesystem_consumers

gsa_srm_largest_files

This table contains information on the largest files in the file system.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager identifier
ip_address	char(15)	IP address of the agent
nodename	varchar(64)	DNS name of the host
hostid	varchar(20)	Unique ID (automatically generated by the agent) for the host
filesystem_id	numeric(13)	Unique ID (automatically generated by the agent) for the file system (matches the filesystem_id generated by hostAgent.gsa_host_filesystem table)

Column Name	Datatype	Description
file_name	varchar(255)	Is the file path beginning from the mount point onwards (i.e.,. exluding the mount point)
type	varchar(255)	Type of the file. The file extension is mapped to a MIME type and this MIME type is reported
owner	varchar(255)	Creator of the file (identifies the srm_user_id)
file_timestamp	datetime(8)	Last modification timestamp
size	numeric(13)	Actual file size (in bytes, not allocation blocks)
access_time	datetime(8)	File last accessed timestamp
creation_time	datetime(8)	File creation timestamp
last_scan_time	datetime(8)	Scanner time stamp
timestamp	datetime(8)	Timestamp when the data was published.
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 95 – gsa_srm_largest_files

gsa_srm_largest_old_files

This table stores information on the files that were not modified after a (user specified) time stamp, sorted on the file size.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager identifier
ip_address	char(15)	IP address of the agent
nodename	varchar(64)	DNS name of the host
hostid	varchar(20)	Unique ID (automatically generated by the agent) for the host
filesystem_id	numeric(13)	Unique ID (automatically generated by the agent) for the file system (matches the filesystem_id generated by hostAgent.gsa_host_filesystem table)
file_name	varchar(255)	Is the file path beginning from the mount point onwards (i.e.,. exluding the mount point)
type	varchar(255)	Type of the file. The file extension is mapped to a MIME type and this MIME type is reported

Column Name	Datatype	Description
owner	varchar(255)	Creator of the file (identifies the srm_user_id)
file_timestamp	datetime(8)	Last modification timestamp
size	numeric(13)	Actual file size (in bytes, not allocation blocks)
last_scan_time	datetime(8)	Scanner time stamp
access_time	datetime(8)	File last accessed timestamp
creation_time	datetime(8)	File creation timestamp
timestamp	datetime(8)	Timestamp when the data was published.
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 96 – gsa_srm_largest_old_files

gsa_srm_user

This table maintains a list of all groups and domains and the users within them.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager identifier
ip_address	char(15)	IP address of agent
nodename	varchar(64)	DNS name of the host
hostid	char(20)	Unique ID (automatically generated by the agent) for the host
srm_user_id	varchar(128)	A local user ID on this host or an user ID in the domain
srm_user_name	varchar(255)	User name corresponding to the srm_user_id
srm_group_id	varchar(128)	A local group ID on this host or a group ID in the domain
srm_group_name	varchar(128)	Group name corresponding to the srm_user_id
allocated_quota	numeric(13)	Total quota allocated for this user on this host (in allocation units)
used_quota	numeric(13)	Quota space used upfor this user on this host (in allocation units)
srm_owner_type	varchar(16)	Owner type (e.g., user)
last_scan_time	datetime(8)	Scanner time stamp

Column Name	Datatype	Description
timestamp	datetime(8)	Timestamp when the data was published
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 97 – gsa_srm_user

gsa_srm_size_distribution

This table maintains information on how the data is distributed across files of various sizes.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager identifier
ip_address	char(15)	IP address of agent
nodename	varchar(64)	DNS name of the host
hostid	varchar(15)	Unique ID (automatically generated by the agent) for the host
filesystem_id	numeric(13)	Unique ID (automatically generated by the agent) for the file system (matches the filesystem_id generated by hostAgent.gsa_host_filesystem table)
range_start	numeric(13)	Start of the size range in bytes (not allocation blocks)
range_stop	numeric(13)	End of the size range in bytes (not allocation blocks)
file_count	numeric(13)	Number of files that fall within this size range
median_file_size	numeric(13)	Median file size on the system. Unit bytes per file (and not blocks per file)
average_file_size	numeric(13)	Average file size (in bytes, not allocation units) of the files that fall within this size range
consumed_blocks	numeric(13)	Total space (in bytes, which is integral multiple of the block_size value) consumed by the files that fall within this size range

Column Name	Datatype	Description
consumed_space	numeric(13)	Total space (actual file size) consumed by the files that fall within this size range
last_scan_time	datetime(8)	Scanner time stamp
timestamp	datetime(8)	Timestamp when the data was published
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 98 – gsa_srm_size_distribution

gsa_srm_type_distribution

This table maintains information on how the data is distributed across files of various type.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager identifier
ip_address	char(15)	IP address of agent
nodename	varchar(64)	DNS name of the host
hostid	char(20)	Unique ID (automatically generated by the agent) for the host
filesystem_id	numeric(13)	Unique ID (automatically generated by the agent) for the file system (matches the filesystem_id generated by hostAgent.gsa_host_filesystem table)
file_type	varchar(128)	Type of the file (file extension)
file_count	numeric(13)	Number of files that fall into this category
consumed_space	numeric(13)	Total space (in bytes, which is integral multiple of the block_size value) consumed by the files of the same type
consumed_blocks	numeric(13)	Total space (in blocks) consumed by the files of the same type
last_scan_time	datetime(8)	Scanner time stamp
timestamp	datetime(8)	Timestamp when the data was published
to_time	datetime(8)	Expiration agg_gmt_timestamp

Column Name	Datatype	Description
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 99 – gsa_srm_type_distribution

gsa_srm_temporary_directories

This table maintains information on storage occupied by temporary data.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager identifier
ip_address	char(15)	IP address of agent
nodename	varchar(64)	DNS name of the host
hostid	char(20)	Unique ID (automatically generated by the agent) for the host
filesystem_id	numeric(13)	Unique ID (automatically generated by the agent) for the file system (matches the filesystem_id generated by hostAgent.gsa_host_filesystem table)
directory_name	varchar(255)	Directory path beginning from the mount point onwards (i.e., exluding the mount point)
owner	varchar(255)	Owner of the directory (identifies the srm_user_id)
consumed_space	numeric(13)	Total space (allocation units) consumed by the files that fall within this size range
file_count	numeric(13)	Number of files that fall into this category
access_time	datetime(8)	Accessed timestamp
last_scan_time	datetime(8)	Scanner time stamp
timestamp	datetime(8)	Timestamp when the data was published
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 100 – gsa_srm_temporary_directories

Chapter Thirteen – Backup Tables

Sun StorageTek Business Analytics provides three backup agents supporting the Semantec Veritas NetBackup, IBM Tivoli Storage Manager (TSM), and EMC Legato NetWorker backup products. While the agents share broad areas of similarity, each agent has unique attributes that are based on the differences among the product lines and interfaces. Some tables are populated by all agents, but some are populated by only specific agent(s).

gsa_backup_calendar

This table supports calendar-based scheduling, including specific date overrides.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	NetBackup Master Server IP address
master_server	varchar(128)	NetBackup Master Server name
policy	varchar(128)	Identifies a NetBackup policy
schedule	char(128)	Full, incremental, on-demand, cumulative incremental, Random
backup_type	int(4)	Backup type identifier
schedule_type	varchar(16)	Backup schedule type; see below
value_1	varchar(16)	See below
value_2	varchar(16)	See below
value_3	varchar(16)	See below
timestamp	datetime(8)	Timestamp collected from agent
ts_offset	int(4)	Difference between agent timestamp and database time in minutes
from_time	datetime(8)	Creation agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp (last_update plus grace period if any)
last_update	datetime(8)	Last update agg_gmt_timestamp

Table 101 – gsa_backup_calendar

Ther different meanings of the schedule_type, value_1, value_2, and value_3 columns are described below.

schedule_type	value_1	value_2	value_3
DATES	0 = include schedule entry 1 = exclude schedule entry	date in seconds in the epoch	-1 = ignore
DAY_OF_MONTH	1-31 = day of month 32 = last day of month	-1 = ignore	-1 = ignore 0 = retries tag present
DAY_OF_WEEK	1–7 = Sun - Sat	1-4 = week of the month 5 = last week of month	-1 = ignore 0 = retries tag present

gsa_backup_cat_usage

This table identifies how much storage the backup server's catalog has utilized.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
server_name	varchar(64)	Backup server name
product	char(3)	Product designator (e.g., NBU)
cat_path	varchar(128)	Directory path to the catalog
blocks_used	int(4)	Usage of free space by catalog
blocks_available	int(4)	File system blocks available
filesystemid	int(4)	File system identifier
timestamp	datetime(8)	Timestamp collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 102 – gsa_backup_cat_usage

gsa_backup_client_policy

This table identifies a backup policy that is assigned to a backup client.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
master_server	varchar(132)	Master Server name
client	varchar(128)	Backup client name
policy	varchar(128)	Policy name
active_status	char(10)	Policy status (e.g., ACTIVE)
effective_date	datetime(8)	Date policy went into effect
timestamp	datetime(8)	Timestamp collected from agent
from_time	datetime(8)	Creation agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp (last_update plus grace period if any)
last_update	datetime(8)	Last update agg_gmt_timestamp

Table 103 – gsa_backup_client_policy

gsa_backup_detail_new

This table provides detailed information on a backup job. The details include a job identifier, the media server, the number of backed up files, as well as the status of the job.

Column Name	Datatype	Description
acom_id	int	Local Manager ID
ip_address	varchar(15)	IP address of agent
backup_id	varchar(139)	Backup identifier; client_name plus julian_time
copy_number	int(4)	Primary or secondary copy identifier
frag_mumber	int(4)	Number of fragments, if applicable
kilobytes	int(4)	Amount (KB) of backed up data
remainder	int(4)	Amount of remaining data to back up
media_type	int(4)	Tape or other media

Column Name	Datatype	Description
density	int(4)	Density of tape (e.g., 8mm)
file_number	int(4)	Incremental counter of files to back up
media_id	varchar(128)	Media identifier (000007)
host_id	varchar(128)	Backup client
block_sz	int(4)	Kilobytes backed up per second
offset	int(4)	File offset of current file being backed up
media_date	datetime(8)	
dev_written_on	int(4)	Specifies the storage unit used
flags	int(4)	
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 104 - gsa_backup_detail_NEW

gsa_backup_events

This table collects the SNMP events sent by Netbackup via ENE. The table is not populated unless you are using this optional Netbackup software application.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager identifier
ip_address	varchar(15)	IP address of agent
job_id	varchar(128)	Job identifier
class	varchar(128)	Allows grouping of multiple clients with similar backup needs; each backup client belongs to one or more classes
client	varchar(128)	Backup client
schedule	varchar(128)	Full, incremental, on-demand, cumulative incremental
schedule_type	varchar(128)	Type of schedule
storage_unit	varchar(128)	Tape library drive or disk on

		media server
Column Name	**Datatype**	**Description**
volume_pool	varchar(64)	Pool of volumes to store backups
status	int(4)	Status of backup
error_msg	varchar(128)	Error message, if applicable
host_id	varchar(32)	Backup client
error_explanation	varchar(255)	Detailed information on an error
error_recommendation	varchar(255)	Recommended action to circumvent error
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 105 – gsa_backup_events

gsa_backup_filelist

This table provides the listing of files that were backed up during a backup operation. Each backup that occurs during a scheduled window is assigned both a backup identifier as well as a job identifier.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
backup_id	varchar(128)	Backup identifier; client_name plus julian_time
job_id	varchar(128)	Backup job identifier
client	varchar(128)	Backup client name
slave	varchar(128)	Secondary backup server name
master	varchar(128)	Master server named
storage_unit	varchar(128)	Tape library drive or disk on media server
class	varchar(128)	Backup class
filelist	varchar(128)	File list (e.g., /var)
job_type	int(4)	Job type indicator
kilobytes	int(4)	Backed up data in KB
files	int(4)	Number of files

Column Name	Datatype	Description
status	int(4)	Job status indicator
status_message	varchar(255)	Status message (e.g., the requested operation was successful)
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 106 - gsa_backup_filelist-2_2

gsa_backup_frequency

This table presents all frequency-based schedule information where the frequency is less than or equal to one (1) week.

Column Name	Datatype	Description
acom_id	int	Local Manager ID
ip_address	char(15)	IP address of agent
master_server	varchar(128)	Master Server name
policy	varchar(128)	Policy name; allows grouping of multiple clients with similar backup needs; each backup client is assigned one or more policies
schedule	varchar(128)	Schedule (e.g., Full)
schedule_type	int(4)	See backup_calendar
backup_type	int(4)	From gsa_backup_types table
retention_level	int(4)	Specifies time image is held in the images database
frequency	int(4)	Specifies the period of time that will elapse until the next backup operation can begin on this schedule.
day_of_week	int(4)	Day(s) of week window opens

Column Name	Datatype	Description
open_window	int(4)	Specifies the beginning of the window during which backup application is allowed to start running this backup. If no window times are open, the schedule is only available for manual backups.
close_window	int(4)	Specifies the end window, which defines when the associated open window is closed.
timestamp	datetime(8)	Time collected from agent
ts_offset	int(4)	Difference between agent time and database time in minutes
from_time	datetime(8)	Creation agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
last_update	datetime(8)	Last update agg_gmt_timestamp

Table 107 - gsa_backup_frequency Table

gsa_backup_frequency_long

This table presents all frequency-based schedule information where the frequency is greater than one (1) week.

Column Name	Datatype	Description
acom_id	int	Local Manager ID
ip_address	varchar(15)	Master Server IP address
master_server	varchar(128)	Master Server name
policy	varchar(128)	Policy name
schedule	varchar(128)	Schedule (e.g., Full)
backup_type	int(4)	From gsa_backup_types table
retention_level	int(4)	Specifies time image is held in the images database
frequency	int(4)	Specifies the period of time that will elapse until the next backup operation can begin on this schedule.

Column Name	Datatype	Description
day_of_week	int(4)	Day(s) of week window opens
open_window	int(4)	Specifies the beginning of the window during which NetBackup is allowed to start running this backup. If no window times are open, the schedule is only available for manual backups.
close_window	int(4)	Specifies the end window, which defines when the associated open window is closed.
timestamp	datetime(8)	Time collected from agent
ts_offset	int(4)	Difference between agent time and database time in minutes
from_time	datetime(8)	Creation agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
last_update	datetime(8)	Last update agg_gmt_timestamp

Table 108 - gsa_backup_frequency_long

gsa_backup_legato_errmsg

This table stores Legato NetWorker backup error messages.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
backup_id	varchar(139)	Backup identifier; client_name plus julian_time
job_id	varchar(128)	Job identifier
sequence_num	int(4)	
error_msg	varchar(255)	Error message
timestamp	datetime(8)	Time collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 109 - gsa_backup_Legato_errmsg Table

gsa_backup_jobs

This table provides detailed information on backup operations associated with all three backup applications. The backup_job_row_id column is a unique key.

Column Name	Datatype	Description
backup_job_row_id	int(4)	Unique job ID
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
job_id	varchar(128)	Job identifier
backup_id	varchar(128)	
parent_id	varchar(128)	
scheduled_start	datetime(8)	Time job was placed into job queue
actual_start	datetime(8)	Indicates when backup operation actually started
end_time	datetime(8)	Job end time
comm_wait	int(4)	How long the TSM server was waiting to receive expected data from the client or waiting for the communication layer to accept data to be sent to the client
media_wait	int(4)	How long session awaited a completion of a mount
job_type	varchar(64)	Numerical representation of type of job being performed: NBU: 0 - 'Backup' 1 - 'Archive' 2 - 'Restore' 3 - 'Verify' 4 - 'Duplicate' 5 - 'Import' 6 - 'DB Backup' 7 - 'Vault' etc. LGTO: 0
job_type_code	int(4)	Job type identifier
job_status	char(10)	Job status

job_status_code	int(4)	Job status identifier
master_server	varchar(128)	Master Server name
Column Name	**Datatype**	**Description**
source	char(64)	Hostname of client being backed up
try_number	int(4)	Number of attempts
backup_media_server	varchar(128)	NetBackup Media server name
Kb_transfered	bigint(8)	Kilobytes transferred in the job
destination_storage_unit	varchar(128)	Tape library drive or disk on media server
destination_drive	varchar(64)	Tape library drive
affected_file_count	int(4)	Number of objects affected (moved, copied, or deleted) by the process or session
examined_file_count	int(4)	Number of objects (files and/or directories) examined by the process or session
failed_file_count	int(4)	Number of objects that failed in the process or session
schedule	varchar(128)	Full, incremental, on-demand, cumulative incremental
schedule_type	int(4)	Schedule type designator
expiration_date	datetime(8)	Expiration of backup window
error_message	varchar(255)	Error message text
dataset	varchar(128)	Dataset
class_level	varchar(128)	Class level
class_type	varchar(128)	Class type
product	varchar(3)	Abbreviation for product
backup_software	varchar(32)	Backup software
backup_software_version	char(10)	Backup software version
compressed	int(4)	Compression on/off flag (class attribute)
encrypted	int(4)	Software encryption on/off flag (class attribute)
reconcile_status	varchar(128)	Backup reconciliation status
reconcile_note	varchar(128)	Backup reconciliation text
reconcile_user	varchar(128)	Backup reconciliation user
reconcile_flag	int(4)	
window_status	int(4)	
window_id	int(4)	Window identifier
timestamp	datetime(8)	Agent timestamp

Column Name	Datatype	Description
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 110 - gsa_backup_jobs

gsa_backup_master

This table shows information on backup operations controlled by the specified classes and schedules. The Master server is identified by IP address.

Column Name	Datatype	Description
acom_id	int	Local Manager ID
ip_address	varchar(15)	IP address of Master Backup Server
backup_id	varchar(139	Backup identifier; client_name plus julian_time
client	varchar(128)	Backup client
class	varchar(128)	Name of class
class_type	int(4)	Specifies the type of configured class. Standard type is used for most UNIX clients. Special classes may be defined for other types of backups, such as ones for Microsoft Exchange clients and/or Oracle databases.
proxy_client	varchar(128)	SNMP proxy client; may be NULL
creator	varchar(64	Identifies the system user (e.g., root) who configured this information.
schedule	varchar(128)	Full, incremental, on-demand, cumulative incremental
schedule_type	int(4)	Schedule type designator
retention_level	int(4)	Retention level indicator
start_date	datetime(8)	Start of backup window date
elapsed_time	int(4)	Time elapsed within window
expiration_date	datetime(8)	Expiration of backup window
compressed	int(4)	Compression on/off flag (class attribute)

encrypted	int(4)	Software encryption on/off flag (class attribute)
Column Name	**Datatype**	**Description**
backed_up_kb	int(4)	Backed up data in kilobytes
backed_up_files	int(4)	Number of backed up files
number_of_copies	int(4)	Primary or secondary copy
number_of_frags	int(4)	Maximum fragment size; zero is unlimited
db_compressed	int(4)	Flag indicating that software compression is turned on or off
catalog_file_name	varchar(255)	Name of catalog file
status	int(4)	Status code (0=success)
timestamp	datetime(8)	Agent timestamp
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 111 - gsa_backup_master

gsa_backup_reconciliation_details

This table stores information on backup reconciliations defined via the backup reconciliation menus. The backup reconciliation menus are accessed under Reporting Administration from the Tools menu selection on the home page.

Column Name	Datatype	Description
reconciliation_id	int(4)	Unique backup reconciliation ID
backup_job_row_id	int(4)	Unique ID that links the backup reconciliation to a backup job
reconciliation_status	char(10)	Reconciliation status (SUCCESSFUL/FAILED)
reconciliation_reason_code	int(4)	Unique backup reconciliation reason identifier
reconciliation_reason_desc	varchar(255)	Adminstrator-specified reason for the specified backup reconciliation
reconciliation_user	varchar(50)	Business Analytics user who created the backup reconciliation
reconciliation_date	datetime(8)	Creation timestamp
obsolete_flag	char(1)	Specifies whether (y/n) the backup reconciliation is obsolete

Table 112 - gsa_backu_reconciliation_details

gsa_backup_schedule_current

This table holds the current week's backup schedule. It is populated from both gsa_backup_frequency and gsa_backup_calendar.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Master Server IP address
master_server	varchar(32)	Master Server name
policy	varchar(64)	Policy name (e.g., Standard)
schedule	varchar(32)	Full, incremental, on-demand, cumulative incremental, User-Backup, etc.
backup_type	int(4)	Backup type identifier
retention_level	int(4)	Retention level indicator; specifies the time the image is held in the images database
frequency	int(4)	Specifies the period of time that will elapse until the next backup operation can begin on this schedule.
day_of_week	int(4)	Day(s) of week window opens

Column Name	Datatype	Description
open_window	int(4)	Specifies the beginning of the window during which NetBackup is allowed to start running this backup. If no window times are open, the schedule is only available for manual backups.
close_window	int(4)	Specifies the end window, which defines when the associated open window is closed.
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
override_flag	varchar(1)	'Y' if override present; 'N' if no override
scheduled_start	datetime(8)	Indicates when backup window opens
ts_offset	int(4)	Difference between agent time and database time in minutes
launch_window	int(4)	Number of seconds to wait for a job to start before declaring this entry 'Never Run'

Table 113 - gsa_backup_schedule_current

gsa_backup_schedule_queue

This table contains all schedules that are to be run or have been run over a window of time specified using configuration parameters. At the end of the window, records are rolled into *gsa_backup_exception_history*.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Master Server IP address
master_server	varchar(32)	Master Server name
client	varchar(64)	Backup client
policy	varchar(64)	Policy name
schedule	varchar(32)	Schedule (e.g., Weekly-Full)
status	char(1)	'N' = Never Run; 'F' = Failed 'A' = Ambiguous; 'S' = Success
scheduled_start	datetime(8)	Time job was scheduled to start

Column Name	Datatype	Description
ts_offset	int(4)	Difference between agent time and database time in minutes
launch_window	int(4)	Number of seconds to wait for a job to start before declaring this entry 'Never Run'
backup_type	int(4)	Backup type identifier
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 114 - gsa_backup_schedule_queue

gsa_backup_status_NEW

This table shows successfully completed backups for a specified server as well as backups that did not complete successfully and any associated error messages.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
master_server	varchar(32)	Master server name
time	datetime(8)	
netbackup_version	varchar(32)	Software release indicator
message_type	int(4)	Message type indicator
message_severity	int(4)	Severity level
server	varchar(128)	Server name
job_id	varchar(128)	Backup job identifier
job_group_id	int(4)	Job group ID
client	varchar(128)	Host name of backup client
class	varchar(128)	Class name
schedule	varchar(128)	Full, incremental, on-demand, cumulative incremental
status	int(4)	Status code (0=successful)
error_msg	varchar(128)	Error message text
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM

Column Name	Datatype	Description
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 115 - gsa_backup_status_new

gsa_backup_tape_capacity

This table contains the typical capacity in MB of specified tape media.

Column Name	Datatype	Description
media_type_desc	varchar(255)	Media description (9840 R, DLT III, DLT IV, LTO ULTRIUM 1, LTO ULTRIUM 2, etc.
typical_capacity_mb	int(4)	Typical capacity of the media in MB

Table 116 - gsa_backup_tape_capacity

gsa_backup_vol_info

This table contains tape library media usage information.

Column Name	Datatype	Description
acom_id	int(4)	Site identifier
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Media Server IP address
master_server	varchar(128)	Master server name
media_id	varchar(128)	Media identifier
media_type_desc	varchar(255)	Media description
media_type	varchar(8)	Media type indicator
bar_code	varchar(255)	Bar code
description	varchar(255)	Descriptive text
volume_pool_desc	varchar(255)	Volume pool description
volume_pool_type	int(4)	Volume pool type indicator
robot_type_desc	varchar(255)	Robotics description
robot_type	int(4)	Type code
robot_number	int(4)	Robotics number (e.g., 0)

Column Name	Datatype	Description
robot_slot	int(4)	Slot number (e.g., 408)
robot_host	varchar(128)	Media server
volume_group	varchar(255)	Volume group name
creation_date	datetime(8)	Creation timestamp
assigned_date	datetime(8)	Timestamp when volume was assigned to the specified volume group
last_mount_date	datetime(8)	Volume last mount timestamp
first_mount_date	datetime(8)	Volume first mount timestamp
expiration_date	datetime(8)	Expiration date for the assignment to the specified volume group
number_of_mounts	int(4)	Specifies the number of time the volume has been mounted
max_mounts_all	int(4)	Maximum number of mounts for reads/writes
status	int(4)	See backup_schedule_queue
from_time	datetime(8)	Creation agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
last_update	datetime(8)	Last update agg_gmt_timestamp

Table 117 - gsa_backup_volume_info

gsa_backup_volume_media

This table contains information on configured tape library media.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Media Server IP address
master_server	varchar(128)	Master server name

Column Name	Datatype	Description
media_id	varchar(128)	Media identifier
media_type_description	varchar(255)	Media description
media_type	varchar(8)	Media type code
bar_code	varchar(255)	Bar code
volume_pool	int(4)	Volume pool identifier
volume_pool_desc	varchar(255)	Volume pool
volume_pool_type	int(4)	Volume pool type code
robot_number	int(4)	Robotics number
robot_slot	int(4)	Slot number
robot_type	int(4)	Robotics type code
robot_type_desc	varchar(32)	Description of robotics
creation_date	datetime(8)	Creation timestamp
last_mount_date	datetime(8)	Volume last mount timestamp
number_of_mounts	int(4)	Specifies the number of time the volume has been mounted
expiration_date	datetime(8)	Expiration date for the assignment to the specified volume group
last_written_date	datetime(8)	Volume last written timestamp
last_read_date	datetime(8)	Volume last read timestamp
max_mounts	int(4)	Maximum times volume can be mounted
retention_level	int(4)	Retention level code
media_status	int(4)	Status code (0=success)
media_available	varchar(1)	Indicates (Y/N) whether or not the media is available
media_full	varchar(1)	Indicates (Y/N) whether or not the media is full
images	int(4)	Number of images

Column Name	Datatype	Description
num_restores	int(4)	Specifies the number of times the volume has been restored
location	varchar(255)	
from_time	datetime(8)	Creation agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
last_update	datetime(8)	Last update agg_gmt_timestamp

Table 118 - gsa_backup_volume_media

gsa_backup_host_exclusion

This table contains hosts exclused from the Management Console Backup Host Exposure report.

Column Name	Datatype	Description
site_id	int(4)	Site identifier
ip_address	varchar(15)	IP address of agent
nodename	varchar(64)	Backup identifier; client_name plus julian_time
host_id	char(20)	Unique host identifier

Table 119 - gsa_backup_host_exclusion

gsa_backup_db_usage

This table identifies storage utilization on the catalog database server.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
cat_path	varchar(128)	Directory path of catalog
mount_point	varchar(128)	Mount point
mb_used	float(8)	Available space utilized (MB)
mb_available	float(8)	Available space (MB)
product	char(3)	Acronym for backup product
server_name	varchar(64)	Host name of database server
timestamp	datetime(8)	Timestamp collected from agent
agg_gmt_timestamp	datetime(8)	Creation agg_gmt_timestamp

Table 120 – gsa_backup_cat_usage

gsa_bu_client_policy_current

This table contains information on current backup client and backup policy configurations for the current week only.

Column Name	Datatype	Description
acom_id	int	Local Manager ID
ip_address	varchar(15)	Agent IP address
master_server	varchar(128)	Master server name
client	varchar(128)	Backup client name
policy	varchar(128)	Policy name
day_of_week	int(4)	Day of week (e.g., 1)

Table 121 –gsa_bu_client_policy_current

gsa_bu_devices

This table consolidates information on all the backup devices and paths for all the TSM servers. It is used to perform trending on the status of all the backup devices.

Column Na me	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
server	varchar(128)	Server name
library_name	varchar(30)	Tape library name
device	char(64)	Device name (e,g, dev/lmcp1)
path_online	char(64)	YES/NO
drive_name	char(30)	Drive name
device_type	char(16)	Device type (e.g., 3590)
drive_online	char(40)	YES/NO
element	int(4)	Element ID (e.g., 0)
acs_drive_id	char(15)	Autmated Tape System drive ID; may be null
drive_state	char(40)	Drive status (Empty, Loaded, etc.)
library_type	varchar(10)	Tape library type
acs_ id	int(4)	Automated Tape System ID
external_mgr	varchar(255)	Extermal device manager
shared_flag	char(3)	YES/NO/Null
lanfree	char(3)	YES/NO/Null
primary_libray_mgr	varchar(64)	

timestamp	datetime(8)	Agent timestamp

Column Name	Datatype	Description
from_time	datetime(8)	Creation agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp (last_update plus grace period if any)
last_update	datetime(8)	Last update agg_gmt_timestamp

Table 122 - gsa_bu_devices

gsa_bu_device_class

This table contains information on device classes that show the device type and the way that device manages its media.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Agent IP address
server_name	varchar(128)	TSM server name
devclass_name	varchar(30)	Device class name
access_strategy	varchar(12)	Access strategy (Sequential, Random)
stgpool_count	int(4)	Storage pool count
devtype	varchar(16)	Device type code
bdc_format	varchar(8)	Device format (e.g. Drive)
capacity	varchar(40)	Capacity (e.g., DLT)
mountlimit	varchar(10)	Maximum number of volumes that can be simultaneously mounted for a device class
mountwait	int(4)	Maximum amount of time (in minutes) that the server waits for a drive to become available for the current mount request
mountretention	int(4)	Amount of time that a mounted volume shoud remain mounted after its last I/O activity
prefix	varchar(8)	Beginning portion of the high-level archive file name on the target server
library_name	varchar(30)	Tape library name
directory	varchar(255)	Directory (e.g., /apps/tsmdb
servername	varchar(31)	Server name
retryperiod	int(4)	Retry period for communications with

		the target server

Column Name	Datatype	Description
retryinterval	int(4)	How often the source server tries to connect to the target server when there is a communications failure
shared	varchar(3)	Shared flag (Yes/No)
last_update_by	varchar(64)	Identifies who last updated the table (e.g., ADMIN)
last_update	datetime(8)	Last update agg_gmt_timestamp
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 123 - gsa_bu_device_class

gsa_bu_drives

This table provides information on library drives, which is a hardware device capable of performing operations on a specific type of sequential media.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
server	varchar(128)	TSM server name
library_name	char(30)	Tape library name
drive_name	char(64)	Drive name
device_type	char(64)	Device type
online	char(40)	YES/NO
acs_drive_id	char(15)	Autmated Tape System drive ID; may be null
drive_state	char(40)	Drive status (Empty, Loaded, etc.)
allocated_to	char(64)	Server allocated to
last_updated_by	char(64)	Server last updated by
last_update	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
clean_freq	char(10)	Clean frequency schedule
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM

Column Name	Datatype	Description
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 124 - gsa_bu_drives

gsa_bu_events

This table provides information on TSM events; it stores similar information to that of the EVENTS table in the TSM database.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
server	varchar(128)	Server name
scheduled_start	datetime(8)	Scheduled starting date/time for the event
actual_start	datetime(8)	Date/time at which the client began processing the scheduled operation
domain_name	char(30)	Name of the policy domain to which the schedule belongs
schedule_name	char(30)	Name of the schedule that initiated this event
node_name	char(30)	Backup client name
status	char(10)	Status (Completed, Missed, Failed, and more)
result	int(4)	Return code from the client that identifies whether the schedule has processed successfully
reason	char(80)	Result explanatory text; may be blank (null)
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM

Table 125 - gsa_bu_events

gsa_bu_events_temp

This table provides a temporary table on TSM events.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
server	varchar(128)	Server name
scheduled_start	datetime(8)	Scheduled starting date/time for the event
actual_start	datetime(8)	Date/time at which the client began processing the scheduled operation
domain_name	char(30)	Name of the policy domain to which the schedule belongs
schedule_name	char(30)	Name of the schedule that initiated this event
node_name	char(30)	Backup client name
status	char(10)	Status (Completed, Missed, Failed)
result	int(4)	Return code from the client that identifies whether the schedule has processed successfully
reason	char(80)	Result explanatory text; may be blank (null)
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 126 - gsa_bu_events_temp

gsa_bu_filespaces

This table provides information on the file spaces that belong to a client node.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
server	varchar(128)	TSM server name
node_name	char(64)	Backup client name

Column Name	Datatype	Description
filespace_name	char(255)	File space name (e.g., /usr) for the client
filesystem_id	numeric(13)	Unique ID (automatically generated by the agent) for the file
filespace_type	char(32)	Type of file space
capacity	float(8)	Amount of space (MB) assigned to this file space on the client node
pct_utilized	float(8)	Percentage of the file space that is occupied
backup_start	datetime(8)	Start date and time of the last incremental backup of the file space
backup_end	datetime(8)	End date and time of the last incremental backup of the file space
delete_occurred	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM when file deletion occurred
unicode_filespace	char(3)	Filespace name in unicode notation
filespace_hexname	char(255)	Filespace name in hex notation
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 127 - gsa_bu_filespaces

gsa_bu_jobs

This table combines scheduled event status information as well as event summary data for a scheduled event.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
server	varchar(128)	TSM server name
scheduled_start	datetime(8)	Scheduled starting date/time for the event

Column Name	Datatype	Description
actual_start	datetime(8)	Date/time at which the client began processing the scheduled operation
start_time	datetime(8)	Start time
end_time	datetime(8)	End time
activity	varchar(64)	Process or session (e.g., backup, archive, migration)
number	int(4)	Process or session number
entity	varchar(64)	User or storage pools associated with the acivity
address	char(15)	Address/network address (e.g. IPaddr:Port#)
domain_name	char(30)	TSM Policy Domain Name
schedule_name	char(30)	Name of schedule that initiated the event
examined	int(4)	Number of objects (files and/or directories) examined by the process or session
affected	int(4)	Number of objects affected (moved, copied, or deleted) by the process or session

Column Name	Datatype	Description
failed	int(4)	Number of objects that failed in the process or session
bytes	bigint(8)	Number of bytes
idle	int(4)	How long session is idle while the server is waiting for a requet from the client
mediaw	int(4)	How long session awaited a completion of a mount
processes	int(4)	Number of processes
status	char(10)	Status (Completed, In Progress)
successful	char(3)	YES/NO
result	int(4)	Return code from the client that identifies whether the schedule has processed successfully
reason	char(80)	Result explanatory text; may be blank (null)
volume_name	varchar(64)	Volume name
drive_name	varchar(64)	Drive name
library_name	varchar(64)	Library name
last_update	datetime(8)	Last update agg_gmt_timestamp
comm._wait	int(4)	How long the server was waiting to receive expected data from the client or waiting for the communication layer to accept data to be sent to the client
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 128 - gsa_bu_jobs

gsa_bu_jobs_temp

This table provides temporary information kept on TSM backups.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
server	varchar(128)	TSM server name
start_time	datetime(8)	Start time
end_time	datetime(8)	End time
activity	varchar(64)	
entity	varchar(64)	Backup client name
schedule_name	char(30)	Name of backup schedule

Table 129 - gsa_bu_jobs_temp

gsa_bu_lib_volumes

This table contains information on backup library volumes.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Agent IP address
server_name	varchar(128)	Server name
library_name	varchar(30)	Library name
volume_name	varchar(255)	Volume name
status	varchar(10)	Volume status (Private, Scratch)
owner	varchar(64)	Ownership
last_use	varchar(10)	Last used for (e.g., Data)
home_element	int(4)	Element address of the SCSI library slot containing the tape. (Does not apply to libraries which contain their own supervisor, such as the IBM 3494 where TSM does not physically control actions.)

Column Name	Datatype	Description
cleanings_left	int(4)	Number of cleaning cycles remaining on cleaner tapes in SCSI libraries where TSM must physically control cleaning. (Is null for libraries, such as the IBM 3494, where the library is controlled by its own supervisor
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 130 - gsa_bu_lib_volumes

gsa_bu_libs

This table contains information on tape unit libraries.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Agent IP address
server_name	varchar(128)	Server name
library_name	varchar(30	A collection of drives for which volume mounts are accomplished via a single method, typically either manually or by robotic actions
library_type	varchar(10)	Type of library (e.g. SCSI/MANUAL/349X/EXTERNAL)
acs_id	int(4)	ACS identifier (number for the ACSLS library)
private_category	int(4)	Specifies the category number for private volumes that must be mounted by name. This parameter is optional. The default value is 300 (X'12C'). It can be a number from 1 to 65279. This parameter is valid only when LIBTYPE=349X.

Column Name	Datatype	Description
scratch_category	int(4)	Specifies the category number to be used for scratch volumes in the library. This parameter is optional. The default value is 301 (X'12D'). You can specify a number from 1 to 65279. This parameter is valid only when LIBTYPE=349X.
external_mgr	varchar(255)	Specifies the location of the external library manager where TSM can send media access requests. This is required and valid only when LIBTYPE=EXTERNAL.
shared	varchar(3)	Shared (yes.no)
lanfree	varchar(3)	LAN free (yes/no)
obeymountretensio	varchar(3)	Observe mount retension (yes/no)
primary_lib_mgs	varchar(64)	Specifies the name of the server that is responsible for controlling access to library resources. This parameter is required and valid only when LIBTYPE=SHARED.
last_update_by	varchar(64)	Identifies who last updated the table (e.g., ADMIN)
last_update	datetime(8)	Last written timestamp
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM

Table 131 - gsa_bu_libs

gsa_bu_occupancy

This table reflects the file space objects inventory that reside in storage pools.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Agent IP address
server_name	varchar(128)	TSM server name
node_name	char(64)	Node name owning file spaces
type	char(20)	The type of data. Possible values are Arch (archive data), Bkup, SPmg (migrated data)

Column Name	Datatype	Description
filespace_name	char(64)	Filespace name belonging to the node
stgpool_name	char(30)	Storage pool name where the file space currently resides
num_files	numeric(13)	Number of logical files that belong to the file space and are stored in the storage pool
physical_mb	float(8)	Amount of physical space (MB) occupied by the file space. Physical space includes empty space within aggregate files, from which files may have been deleted or expired
logical_mb	float(8)	Amount of logical space (MB) occupied by the file space. Logical space is the actual space used to store files, including empty space within aggregates
filespace_id	numeric(13)	Filespace identifier (FSID) for the file space. The server assigns a unique FSID when a file space is first stored on the server.
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 132 - gsa_bu_occupancy

gsa_bu_paths

A TSM path represents a data and control path from a source to a destination. To use a library or drive with TSM, a path must be defined between the device and either the TSM server or another designated data mover.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Agent IP address
server_name	varchar(128)	TSM server name
source_name	char(64)	Name of server or data mover defined as the source for the path
source_type	char(15)	Data mover, drive or server

destination_name	char(64)	Name of device defined as the destination for the path
destination_type	char(15)	Data Mover/Library
library_name	char(64)	Name of the library to which the drive belongs

	Datatype	Description
node_name	char(64)	Node name
device	char(64)	Devicespecial file name by which the library's robotic mechanism is known (e,g, dev/lmcp1)
external_mgr	varchar(255)	Extermal device manager
lun	char(24)	LUN
initiator id	int(4)	Initiator ID
directory	char(128)	Name of directory
online	char(40)	Online status (YES/NO) for the path
last_update_by	varchar(64)	Identifies who last updated the table (e.g., ADMIN)
last_update	datetime(8)	Last written timestamp
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 133 - gsa_bu_paths

gsa_bu_report_params

This table is used to control the behavior of the TSM Daily Status report and can be updated using the Management Console's TSM Parameters user interface accessed under Tools.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Agent IP address
window_start	datetime(8)	Scheduled start
window_end	datetime(8)	Scheduled end
diskvol_warning_pct	int(4)	Disk volume full warning percentage (e.g., 10)
diskpool_warning_pct	int(4)	Disk pool full warning percentage (e.g., 80)
reclaim_warning_pct	int(4)	Reclamation warning percentage (e.g., 10)

tapevol_thresh_pct	int(4)	Tape volume threshold percentage (e.g., 65)
tapevol_warning_cnt	int(4)	Tape volume warning count

Column Name	Datatype	Description
tapedrive_warning_pct	int(4)	Tape drive warning percentage
tapepath_warning_pct	int(4)	Tape path warning percentage
susptape_warning_pct	int(4)	Suspect tape warning percentage
susptape_error_pct	int(4)	Suspect tape error percentage

Table 134 - gsa_bu_report_params

gsa_bu_storage_pools

This table contains information on TSM storage pools.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Agent IP address
server_name	varchar(128)	Server name
stgpool_name	varchar(31)	Storage pool name
pool_type	varchar(31)	Type of storage pool (e.g., Primary)
devclass	varchar(31)	Name of the device class assigned to the storage pool
est_capacity_mb	float(8)	Estimated capacity in MB
pct_utilized	float(8)	Percentage of capacity utilized
pct_migr	float(8)	Percentage migrated
pct_logical	float(8)	The logical occupancy of the storage pool as a percentage of the total occupancy
highmig	int(4)	High migration threshold
lowmig	int(4)	Low migration threshold
migprocess	int(4)	Number of processes used to migrate files out of the storage pool
nextstgpool	varchar(31)	Storage pool that is the destination for data migrated from this storage pool
bsp_maxsize	float(8)	The maximum size of files that may be stored in the storage pool during a session with a client

Column Name	Datatype	Description
access	varchar(15)	Specifies how client nodes and server processes (such as migration and reclamation) can access files in the storage pool. The default value is READWRITE. READWrite access specifies that client nodes and server processes can read and write to files stored on volumes in the storage pool and READOnly, which specifies that client nodes can only read files from the volumes in the storage pool.
bsp_description	varchar(255)	Optional description for the storage pool
ovflocation	varchar(255)	The location where volumes in the storage pool are stored when they are ejected from an automated library
cache	varchar(3)	Whether cache (YES/NO) is enabled for files migrated to the next storage pool
collocate	varchar(20)	Whether collocation is enabled (YES/ NO)
reclaim	int(4)	Threshold that specifies when volumes in the storage pool are reclaimed
maxscratch	int(4)	Maximum scratch volumes that a server can request for the storage pool
reusedelay	int(4)	Number of days that must elapse after all files have been deleted from a volume before the server returns that volume to scratch or reuses the volume
migr_running	varchar(20)	Whether at lease one migration process is running indicator (Yes/No)
migr_mb	float(8)	Data migrated out of the storage pool in MB
migr_seconds	int(4)	Amount of time (in seconds) that has elapsed since migration began, if applicable
recl_running	varchar(20)	Whether a reclamation process is active for the storage pool
recl_volume	varchar(255)	The name of the volume for which migration or reclamation process is active
chg_time	datetime(8)	Change timestamp
chg_admin	varchar(255)	Change administrator (e.g., ADMIN)
reclaimstgpool	varchar(31)	Reclaimation storage pool
migr_delay	int(4)	Migration delay
migcontinue	varchar(20)	Migration continue flag (Yes/No)

Column Name	Datatype	Description
dataformat	varchar(12)	Data format (e.g., Native)
copystgpools	varchar(255)	Copy storage pool(s) that will have data simultaneously written to them when data is backed up or archived to the primary storage pool
copycontinue	varchar(20)	Whether a server should continue writing data to other copy storage pools in the list or terminate the entire transaction when a write failure occurs to one of the copy pools in the list
crcdata	varchar(9)	Whether data is validated by a cyclic redundancy check (CRC) when data is transferred during data storage and retrieval on a device (YES/NO)
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 135 - gsa_bu_storage_pools

gsa_bu_summary

This table provides summary information on TSM backups.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address of agent
server	varchar(128)	TSM server name
start_time	datetime(8)	Start activity timestamp
end_time	datetime(8)	End activity timestamp
activity	varchar(64)	Process or session number (e.g., BACKUP, FULL_DBBACKUP, TAPE MOUNT)
number	int(4)	Process or session number
entity	varchar(64)	User or storage pools associated with the activity
address	char(15)	Client IP address

Column Name	Datatype	Description
schedule_name	char(30)	Name of backup schedule
examined	int(4)	Number of objects (files/directories) examined during the activity
affected	int(4)	Number of objects (files/directories) affected (moved/copied/deleted) by the process or session
failed	int(4)	Number of objects that failed in the process or session
bytes	bigint(8)	Number of bytes
idle	int(4)	How long session was idle while the server was waiting for a request from the cient
mediaw	int(4)	How long session awaited a completion of a mount
processes	int(4)	Number of processes
status	char(10)	Status (Completed, In Progress)
successful	char(3)	YES/NO
volume_name	varchar(64)	Volume name
drive_name	varchar(64)	Drive name (e.g., 3590A)
library_name	varchar(64)	Library name (e.g., 3494LIB)
last_use	varchar(64)	How last used (Data, DbBackup)
comm_wait	int(4)	How long the server was waiting to receive expected data from the client or waiting for the communication layer to accept data to be sent to the client
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 136 - gsa_bu_summary

gsa_bu_volume_history

This table contains information on the historical usage of backup volumes.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Agent IP address
server_name	varchar(128)	Server name
date_time	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
is_unique	int(4)	
type	varchar(20)	Type of volume (e.g., BACKUPFULL
backup_series	int(4)	The full backup and all incremental backups that apply to that full backup. Another series begins with the next full backup of the database.
backup_operation	int(4)	For BACKUPFULL or BACKUPINCR volume types, the operation number of this backup volume within the backup series. The full backup within a backup series is operation 0. The first incremental backup for that full backup is operation 1, the second incremental backup is operation 2, and so on.
volume_seq	int(4)	The sequence or position of the volume within the backup series.
devclass	varchar(31)	The name of the device class associated with this volume.
volume_name	varchar(255)	Volume name

Column Name	Datatype	Description
location	varchar(255)	The location of the volume. This information is available only for volume types of BACKUPFULL, BACKUPINCR, DBDUMP, EXPORT and RPFILE. For RPFILE this location field is the server name defined in the device class definition used by the PREPARE command when the DEVCLASS parameter is specified.
command	varchar(255)	When the volume type is EXPORT or BACKUPSET, this field shows the command that was used to generate the volume. If the EXPORT or BACKUPSET is on more than one volume, the command is displayed with the first volume but not with any of the other volumes. When any volume type other than EXPORT or BACKUPSET is used, this field is blank.
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 137 - gsa_bu_volume_history

gsa_bu_volumes

This table contains information on backup volumes within a TSM backup environment.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	Agent IP address
server_name	varchar(128)	Server name
volume_name	varchar(255)	Volume name
stgpool_name	varchar(31)	Storage pool name

Column Name	Datatype	Description
devclass_name	varchar(31)	Device class assigned to the storage pool
est_capacity_mb	float(8)	Estimated capacity of the volume in MB
pct_utilized	float(8)	Percentage of capacity utilized
status	varchar(10)	Volume status (e.g., Online, Full)
access	varchar(15)	Whether the volume is available to the server
pct_reclaim	float(8)	Percentage reclaimed
scratch	varchar(20)	Whether this volume was originally a scratch volume that the server acquired for its use. If the volume was a scratch volume, the server returns the volume to scratch when the volume becomes empty.
error_state	varchar(20)	Whether the volume is in error state. The server cannot write to a volume in error state
num_sides	int(4)	Information reserved for TSM
times_mounted	int(4)	Number of times mounted
write_pass	int(4)	Number of times the volume has been written to from the beginning to end
last_write_time	datetime(8)	Date/time volume was last written
last_read_time	datetime(8)	Date/time volume was last read
pending_date	datetime(8)	The date that the status of the volume changed to pending
write_errors	int(4)	Number of write errors
read_errors	int(4)	Number of read errors
location	varchar(255)	Location of the volume
chg_time	datetime(8)	Date/time changed
chg_admin	varchar(30)	Administrator who defined or most recently updated the volume
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 138 - gsa_bu_volumes

gsa_debug_job_status

This table stores information on backup jobs. The debug_job_status table contains the same fields as those described below for the job status table.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
job_start_time	datetime(8)	Date/time job started
product_version	varchar(32)	Backup application (e.g., TSM)
message_type	int(4)	Message severity code
message_severity	int(4)	Severity level
server	varchar(128)	Server name
job_id	varchar(128)	Backup job identifier
job_group_id	int(4)	Job group ID
client	varchar(128)	Host name of backup client
class	varchar(128)	Class name
schedule	varchar(128)	Full, incremental, on-demand, cumulative incremental, etc.
status	int(4)	Status code (0=successful)
status_msg	varchar(128)	Status message text
job_type	int(4)	Job type code
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 139 - gsa_debug_job_status

gsa_restore_filelist

This table provides information on the restored files.

Column Name	Datatype	Description
acom_id	integer	Local Manager ID
ip_address	ip_address	IP address where the Agent is installed
backup_id	int(4)	Backup identifier; client_name plus julian_time
job_id	varchar(128)	Job identifier

Column Name	Datatype	Description
client	varchar(128)	Backup client
slave	varchar(128)	Backup slave
master	varchar(128)	Master server
storage_unit	varchar(128)	Tape library drive or disk on media server
class	varchar(128)	NetBackup class
job_type	int(4)	Type of job (e.g., restore)
kilobytes	int(4)	Size of restore in KB
files	int(4)	Number of files in restore job
status	int(4)	Status indicator
status_message	varchar(255)	Status message text
job_start_time	datetime(8)	Job start time
timestamp	datetime(8)	Inserted by the agent
agg_gmt_timestamp	datetime(8)	Inserted by the Aggregator

Table 140 - gsa_restore_file_list

gsa_restore_status

This table provides information on the the status of restore jobs.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address where the Agent is installed
job_start_time	datetime(8)	Job start time
product_version	varchar(32)	Backup software release
message_type	int(4)	Type of message indicator
message_severity	int(4)	Message severity
server	varchar(128)	Server name
job_id	varchar(128)	Job identifier
job_group_id	varchar(128)	Job group identifier
client	varchar(128)	Backup client
class	varchar(128)	Class

Column Name	Datatype	Description
schedule	varchar(128)	Schedule name
status	int(4)	Status indicator
status_message	varchar(255)	Status message text
timestamp	datetime(8)	Inserted by the agent
agg_gmt_timestamp	datetime(8)	Inserted by the Aggregator

Table 141 - gsa_restore_status

Chapter Fourteen – Tape Library Tables

This chapter describes the tape library tables.

gsa_tlib_config

The Tape Library Unit Agent populates this table with high-level, configuration information on a Tape Library Unit.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address where Tape Library Unit Agent is installed
agent	varchar(32)	Agent (STK, ACSLS)
lib_id	varchar(128)	<vendor>-<model>-<s/n>
lib_index	int(4)	Integer index of the library;if only 1 library, this would be module number 0
vendor	varchar(128)	Maker of the library
lib_count	int(4)	Count of the libraries in the library table
lib_detected	int(4)	This is a table of library detected on the SCSI bus
model	varchar(64)	The model of the library
fw_ver	varchar(64)	The micro code level of the library
hw_ver	vrchar(64)	Hardware version of the library
build_date	datetime(8)	Build timestamp
serial_no	varchar(64)	The model serial number of the library
drive_cap	int(4)	Capacity of the number of drives the library can hold
url	varchar(256)	Url provided at the library level - Can be used for web based monitoring
alias	varchar(128)	Alias of the library. The alias is associated with the serial number of the library

Column Name	Datatype	Description
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 142 – tlib_config

gsa_tlib_slots

The Tape Library Unit Agent populates this table with information on the cells.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address where Tape Library Unit Agent is installed
agent	varchar(32)	Agent (STK, ACSLS)
lib_id	varchar(128)	<vendor>-<model>-<s/n>
lib_index	int(4)	Integer index of the library; if only 1 library, this would be module number 0
slot_type	int(4)	Type of slot code for: • slot • CAP • passthru • drive • transient drive
component_id	varchar(64)	Slot number
panel	varchar(5)	Panel - all libraries
row	varchar(5)	Row - all libraries
column	varchar(5)	Column - all libraries
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM

Column Name	Datatype	Description
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 143 – tlib_ slots

gsa_tlib_drives

The Tape Library Unit Agent populates this table with information on the tape library's drives.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address where Tape Library Unit Agent is installed
agent	varchar(32)	Agent (STK, ACSLS)
lib_id	varchar(128)	<vendor>-<model>-<s/n>
lib_index	int(4)	Integer index of the library; if only 1 library, this would be module number 0
componet_id	varhcar(128)	Component id - drive
vendor	varchar(64)	Maker of the drive
model	varchar(64)	Model number of the tape drive
serial_no	varchar(64)	Serial number of the tape drive
firm_version	varchar(64)	The firmware version of the drive firmware

Column Name	Datatype	Description
media_type	varchar(64)	The model of the drive. Other values might be returned to describe new model of drives. These values and their corresponding drive model will be read from a file at the agent start. undetermined (1), dlt2000 (2), dlt2000XT (3), dlt4000 (4), dlt7000 (5), dlt12000 (6), dlt20000(7), drive9840 (8), twinPeaks4890 (9) , silverton4490or4791 (10), redWoodSD3 (11), timberLine9490 (12), timberLine9491 (13), drve4781or4480 (14), dlt8000 (15)
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp

Column Name	Datatype	Description
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 144 – tlib_drives

gsa_tlib_contents

This table is designed to provide overall system information.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address where the Tape Library Unit Agent is installed
agent	varchar(32)	Agent (STK, ACSLS)
lib_id	varchar(128)	<vendor>-<model>-<s/n>
lib_index	int(4)	Integer index of the library; if only 1 library, this would be module number 0
slot_type	int(4)	Slot type code for: • CAP • passthru • Slot • Transient drive
component_id	varchar(128)	Component id - drive
media_type	varchar(64)	The type of media (e.g., DLT IV)
media_id	varchar(64)	Barcode – volume label
media_class	char(16)	Data, Cleaning
lib_status_flag	char(1)	Is the tape in the library or not - Y – yes in the library - N – not in the library
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp

Column Name	Datatype	Description
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 145 – tlib_contents

gsa_tlib_interfaces

This table is designed to provide information on the interfaces (e.g., SCSI) to the Tape Library Unit.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address where the Tape Library Agent is installed
agent	varchar(32)	Agent (STK, ACSLS)
lib_id	varchar(128)	<vendor>-<model>-<s/n>
lib_index	int(4)	Integer index of the library; if only 1 library, this would be module number 0
owner_type	varchar(32)	Owner type code for library, robot, drive, passthru
owner_id	varchar(128)	Component_index
if_type	varchar(32)	- SCSI - type of SCSI Mechanical fibre -ethernet
hw_addr	varchar(64)	WWPN, MAC
if_addr	varchar(32)	- SCSI address - port_id

		- IP address

Column Name	Datatype	Description
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 146 - tlib_interfaces

gsa_tlib_ cell_statisitics

This table provides statistical information on the activities of the Tape Library Unit. The tlib_statistics table contains the same identical fields as those described below for the tlib_cell_statistics table.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	char(15)	IP address where the Tape Library Agent is installed
agent	varchar(32)	Agent (STK, ACSLS)
lib_id	varchar(128)	<vendor>-<model>-<s/n>
lib_index	int(4)	Integer index of the library; if only 1 library, this would be module number 0
type	int(4)	Code for library, CAP, Drive, Media, or Robot
start	datetime(8)	Start date/time
end_time	datetime(8)	Expiration
interval	int	Collection interval in seconds
duration	int	Duration in seconds
stat_type	varchar(64)	Type of statistic (Enter, Eject)
successes	int(4)	Counter for successes

Column Name	Datatype	Description
retries	int(4)	Library Media Drive # of mount retries
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 147 – tlib_cell_statistics

gsa_tlib_status

This table provides general status information on the enterprise-wide Tape Library Units.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	ipaddress	IP address where the Tape Library Agent is installed
agent	varchar(32)	Agent (STK, ACSLS)
lib_id	varchar(128)	<vendor>-<model>-<s/n>
lib_index	int(4)	Integer index of the library; if only 1 library, this would be module number 0
type	int(4)	Type code
id_1	varchar(32)	Component ID (e.g., Drive)
id_2	varchar(32)	Sub component ID (e.g., cap a)
status		• Okay • Empty • Loaded • Busy • INIT • OFFLINE • UNKNOWN

		• DEGRADED • OPEN (CAP)
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 148 – tlib_status

gsa_tlib_events

This table provides events generated by the Tape Library Unit Agent.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address where the Tape Library Agent is installed
agent	varchar(32)	Agent (STK, ACSLS)
lib_id	varchar(128)	<vendor>-<model>-<s/n>
lib_index	int(4)	Integer index of the library; if only 1 library, this would be module number 0
type	int(4)	Type code
id_1	varchar(32)	Component ID (e.g., Drive)
id_2	varchar(32)	Sub component ID (e.g., cap a)
event_source	varchar(32)	FSC(error) source/trap IP
event_id	varchar(128)	FSD(error) id/trap OID

Column Name	Datatype	Description
event_msg	varchar(256)	Description
event_time	datetime(8)	Time of the event
serverity	int(4)	The severity of the event
timestamp	datetime(8)	Time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 149 - tlib_events

gsa_tlib_utilization_cache

This table provides information that is used in the Management Console's Enterprise Library Overview pane.

Column Name	Datatype	Description
site_id	int	Site identifier
lib_id	varchar(128)	<vendor>-<model>-<s/n>
lib_index	int(4)	Integer index of the library; if only 1 library, this would be module number 0
alias	varchar(128)	Alias name
free_cells	int(4)	Number of free cells
active_cells	int(4)	Number of active cells
total_cells	int(4)	Number of total cells in the tape library
percent_utilized	int(4)	Percentage of total cells in the tape library utilized
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll timestamp (yy/mm/dd hh/mm/ss) in GMT

Table 150 - tlib_cache_utilization

gsa_tlib_alias

This table provides aliases for tape libraries.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	ipaddress	IP address where the Tape Library Agent is installed
lib_id	varchar(128)	<vendor>-<model>-<s/n>
lib_index	int(4)	Integer index of the library; if only 1 library, this would be module number 0
type	int(4)	Library type.
id_1	varchar(32)	Identifier
id_2	varchar(32)	Identifier
alias_source	varchar(32)	
alias_type	varchar(32)	
alias_id	varchar(32)	
timestamp	datetime(8)	Inserted by the agent
last_update	datetime(8)	Insert stored procedure produced
to_time	datetime(8)	Insert stored procedure produced
agg_gmt_timestamp	datetime(8)	Inserted by the Aggregator

Table 151 - tlib_alias

Chapter Fifteen – Database Tables

This chapter briefly describes the following database tables:

dba_app_storage_unit
dba_database_server
dba_db_specific_data
dba_db_stats
dba_logical_storage_unit
dba_physical_storage_unit
dba_served_databases
dba_io_indicators

The table layout of each table is also shown.

gsa_dba_app_storage_unit

This table presents the database server and storage information.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
db_server_ip	char(15)	IP address of database server
port_no	int(4)	Database server TCP port number
db_name	varchar(64)	Database Name
unit_name	varchar(128)	Unit name (e.g., sysdepends)
owner	varchar(128)	Owner (dbo)
measure_type	varchar(25)	Measure of the application storage unit (e. g. table_row_count, table_size, index_size, or view_row_count)
measure	varchar(25)	Actual measurement value of the measure for the storage unit
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 152 – gsa_dba_app_storage_unit

gsa_dba_database_server

This table presents the database servers that have been installed.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
db_server_ip	varchar(15)	Unique Database Sever Identifier
port_no	int(4)	Database server port number (e.g., 1433 SQL Server)
database_type	varchar(25)	Type of Database : e.g. Oracle. Sybase, etc
version	varchar(25)	Database Server version
instance_name	varchar(64)	Database Server instance name
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 153 – gsa_dba_database_server

gsa_dba_db_specific_data

This table presents database specific information.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
db_server_ip	varchar(15)	Unique Database Sever Identifier
port_no	int(4)	Database server port number
db_name	varchar(64)	Database Name
map_type	varchar(25)	Type of Map. The type will have value either PSU_LSU_map or LSU_ASU_map
item1	varchar(255)	Map Item1 (e.g., PRIMARY)
item2	varchar(255)	Map Item2 (e.g., SYSMESSAGES)
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 154 – gsa_dba_db_specific_data

gsa_dba_db_stats

This table consists of the database statistical data.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
db_server_ip	varchar(15)	Unique Database Sever Identifier
port_no	int(4)	Database server port number
db_name	varchar(64)	Database Name
tables_count	int(4)	Number of tables
views_count	int(4)	Number of views
indexes_count	int(4)	Number of indexes
users_count	int(4)	Number of users
active_users_count	int(4)	Number of active users
sessions_count	int(4)	Number of sessions
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 155 – gsa_dba_db_stats

gsa_dba_logical_storage_unit

This table contains information about storage units at the database system level

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
db_server_ip	varchar(15)	Unique Database Sever Identifier
port_no	int(4)	Database server port number
db_name	varchar(64)	Database Name
unit_type	char(25)	Logical Storage Unit Type
unit_name	varchar(128)	Logical storage unit name
used_space	int(4)	Used Space (in bytes)
total_space	int(4)	Total Space (in bytes)

Column Name	Datatype	Description
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 156 – gsa_dba_logical_storage_unit

gsa_dba_physical_storage_unit

This table contains information about storage units at the operating system level

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
db_server_ip	varchar(15)	Unique Database Sever Identifier
port_no	int(4)	Database server port number
unit_type	varchar(25)	Physical storage unit type
unit_name	varchar(128)	Physical storage unit name
physical_type	char(10)	Physical type
physical_name	varchar(200)	Physical name
used_space	int(4)	Used Space (in bytes)
total_space	int(4)	Total Space (in bytes)
auto_increment	int(4)	A boolean value indicating, whether the storage unit is allowed to increment automatically or not. Values : true | false
auto_incr_max_limit	int(4)	The maximum limit, up to which it can grow, for a storage unit which is allowed to autoincrement. Otherwise, the total size of storage unit. For unlimited autoincrement storage units it will contain 'Unlimited'
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 157 – gsa_dba_physical_storage_unit

gsa_dba_served_databases

This table contains Database type, name and version information

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
db_server_ip	char(15)	Unique Database Sever Identifier
port_no	int(4)	Database server port number
db_name	varchar(64)	Database Name
owner	varchar(32)	Database Owner
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
to_time	datetime(8)	Expiration agg_gmt_timestamp
last_update	datetime(8)	Insert stored procedure produced
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 158 – gsa_dba_served_databases

gsa_dba_io_indicators

This table presents the database server performance data.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
db_server_ip	char(15)	Unique Database Server Identifier
port_no	int(4)	Database server port number
unit_type	varchar(64)	Physical storage unit type
unit_name	varchar(255)	Unit name
reads	int(4)	Number of reads
writes	int(4)	Number of writes
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 159 - gsa_dba_io_indicators

Chapter Sixteen – NAS Tables

This chapter briefly describes the NAS tables. The table layout of each table is also shown.

gsa_nas_component

This table contains summary configuration and status information for each major component of NAS server.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	LM's IP address
gsa_id	varchar(64)	Globally-unique identifier for this device
component_id	varchar(20)	Short identifier of the component
name	varchar(64)	Long identifier of the component
serial	varchar(20)	Serial number of the component
type	varchar(20)	Standardized component type
model	varchar(20)	Model of the component
software_name	varchar(20)	Name of software running on the component if applicable
software_version	varchar(20)	Version of software running on component if applicable
software_version_minor	varchar(20)	Minor version of software used on component
firmware_version	varchar(20)	Firmware version of individual component if applicable
numcpus	int(4)	Number of CPUs in individual component
volatile_memory	int(4)	amount of regular (volatile) memory (in MB) on the component
nonvolatile_memory	int(4)	amount of NVRAM (non-volatile memory) on the component
uptime	int(4)	Seconds since last reboot of the component, -1 for unknown
power_status	int(4)	Total number of failed power supplies
fan_status	int(4)	Total number of failed fans

Column Name	Datatype	Description
battery_status	int(4)	Numeric code indicating status of batteries
disk_status	int(4)	Total number of failed disks
temperature_status	int(4)	0: Temperature Normal, 1: Temperature too high, -1: Unknown or not available
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to-time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 160 – gsa_nas_component

gsa_nas_config

This tale contains summary configuration information for NAS server, one row per server.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	LMs IP address
nas_ip_address	varchar(15)	Contains the IP address of the NAS server interface through which the data was obtained
gsa_id	varchar(64)	Globally-unique identifier for this device
system_id	varchar(32)	Device system ID
nodename	varchar(64)	Configured name of the device
vendor	varchar(32)	Manufacturer of the device
product	varchar(32)	Product line of the device
model	varchar(20)	Product model number
cluster_status	varchar(12)	Status of cluster
cluster_partner	varchar(64)	Cluster partner identifier
cluster_partner_status	varchar(64)	Status of cluster partner
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp

Column Name	Datatype	Description
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 161 – gsa_nas_config

gsa_nas_filesystem

This table is designed to describe all the currently mounted filesystems on a NAS server, and is very similar to the corresponding table for host agent.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	LM's IP address
gsa_id	varchar(64)	Globally-unique identifier for this device
filesystem_name	varchar(255)	Mount point for the filesystem
filesystem_type	varchar(20)	Type of filesystem
mount_device	varchar(255)	Device path that is being mounted
blocksize	int(4)	Size, in bytes, of a block
total_blocks	numeric(20,0)	Total blocks in filesystem
blocks_available	numeric(20,0)	Available blocks in standard filesystem (not including snapshots).
blocks_used	numeric(20,0)	Blocks used in filesystem (not including snapshots).
snapshot_reserved	numeric(20,0)	Blocks reserved for use in snapshots
snapshot_used	numeric(20,0)	Blocks actually used in snapshots
total_files	numeric(20,0)	Total number of addressable structures (i.e. inodes in UNIX) in the filesystem
files_used	numeric(20,0)	Number of addressable structures allocated to existing files and directories in the filesystem
files_available	numeric(20,0)	Number of addressable structures in the filesystem available for creation of new files by non-super users

Column Name	Datatype	Description
lvm	varchar(20)	Logical volume manager used to manage the device
logical_device_group	varchar(32)	Logical device group the mounted device is a member of
logical_device_name	varchar(32)	The logical device name of the mounted device
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 162 – gsa_nas_filesystem

gsa_nas_filesystem_mapping

This table represents filesystem copies, e.g. snapshots.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	LMs ip address
gsa_id	varchar(64)	Globally-unique identifier for this device
destination_name	varchar(255)	Name of the destination snapshot or destination filesystem
destination_name	varchar(255)	Full pathname to the destination snapshot or destination filesystem
source_name	varchar(255)	Name of the source filesystem
mapping_type	varchar(16)	Initially, "snapshot" (or "SnapShot" if we want compatibility with the array agents).
mapping_status	varchar(16)	status is one of "split" or "failed"
last_sync_time	datetime(8)	Time when copy was last synchronized (current time if currently in sync)
schedule	varchar(32)	be a scheduled snapshot, show the snapshot schedule
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp

Column Name	Datatype	Description
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 163 - gsa_nas_filesystem_mapping

gsa_nas_filesystem_options

This table will contain a summary of all file system-specific options (as far as possible). Not all options need be defined for all file systems.

Column Name	Datatype	Description
acom_id	int	Local Manager ID
ip_address	varchar(15)	LM's IP address
gsa_id	varchar(64)	Globally-unique identifier for this device
filesystem_name	varchar(255)	As defined for gsa_nas_filesystem
option_name	varchar(255)	Filesystem options
option_value	varchar(255)	Literal string value for the option
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 164 - gsa_nas_filesystem_options

gsa_nas_interface

This table describes the varcharacteristics of an interface within the NAS server, such as an Ethernet adapter or a storage adapter.

Column Name	Datatype	Description
if_name	varchar(32)	Interface name
if_usage	int(4)	Usage identifier
if_type	int(4)	Globally-unique identifier for this interface
if_speed	int(4)	Interface device speed
if_phys_addr	varchar(16)	Slot identifier
if_node_WWN	varchar(16)	Adapter WWN
if_node_WWN	varchar(16)	Adapter port WWN
if_mtu	varchar(16)	Message Transfer Unit size for Ethernet adapter
if_admin_status	int(4)	Status of management interface
if_oper_status	int(4)	Status of specified interface
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM

Table 165 - gsa_nas_interface

gsa_nas_logicalvolume_config

This table is designed to describe all the varcharacteristics of logical devices currently configured on the NAS server.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	LM's IP address
gsa_id	varchar(64)	Globally-unique identifier for this device
type	varchar(20)	Predetermined set of values that specifies the type of logical device being reported
raw_blocks	numeric(20,0)	Total amount of all raw space contributing to the device being reported, including parity and mirrors, in blocks of size blocksize

Column Name	Datatype	Description
capacity	numeric(20,0)	The total data capacity of the device being reported, in blocks (multiples of blocksize), not including parity or additional mirrors
blocksize	int(4)	The size, in bytes, of each block of the device
device_layout	varchar(20)	One of a predetermined set of values that specifies the layout of the device being reported
logical_device_status	varchar(20)	Status of the device being reported
lvm	varchar(20)	Logical volume manager used to manage the device
logical_device_group	varchar(64)	Logical device group the mounted device is a member of
logical_device_name	varchar(64)	The logical device name of the mounted device
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 166 - NAS_logicalvolume_config

gsa_nas_logicalvolume_relation

This table is designed to describe the relationship between logical devices found in the gsa_logicalvolume_config table.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	LMs ip address
gsa_id	varchar(64)	Globally-unique identifier for this device
uses_lvm	varchar(20)	Contains the lvm for a device used by the device described by the lvm, logical_device_group and logical_device_name columns
logical_device_group	varchar(64)	Logical device group the mounted device is a member of

Column Name	Datatype	Description
logical_device_name	varchar(64)	The logical device name of the mounted device
uses_logical_device_group	varchar(64)	Contains the logical_device_group for a device used by the device described by the lvm, logical_device_group and logical_device_name columns
uses_logical_device_name	varchar(64)	Contains the logical_device_name for a device used by the device described by the lvm, logical_device_group and logical_device_name columns
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 167 - gsa_nas_logicalvolume_relation

gsa_nas_options

This table will contain a summary of all options for the NAS environment.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	IP address of agent
gsa_id	varchar(64)	Globally-unique identifier for this device
option_type	int(4)	One of the following: 1 (license option) or 2 (configuration option)
option_name	varchar(255)	Option name
option_value	varchar(255)	Option value
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM

Column Name	Datatype	Description
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 168 - gsa_nas_options

gsa_nas_physicalvolume_config

This table is designed to describe the physical varcharacteristics of all the physical disk devices currently visible to the NAS server, whether internal to the NAS server or accessed through an external array.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	LM's IP address
gsa_id	varchar(64)	Globally-unique identifier for this device
physical_device_name	varchar(64)	A unique physical system device and represents the entire device
vendor	varchar(20)	Vendor of the physical disk
product	varchar(20)	Product information for the device
serial_number	varchar(20)	Serial number of the component
location_1	varchar(12)	Identifier 1 of physical drive location
location_2	varchar(12)	Identifier 2 of physical drive location
volume_id	varchar(64)	unique volume id for the device (if applicable)
array_id	varchar(64)	unique gsa_id for the array supplying the device, if applicable
physical_device_status	varchar(20)	display the status of the physical device
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 169 - gsa_nas_physicalvolume_config

gsa_nas_physicalvolume_path

This table is designed to describe all the paths to devices listed in the gsa_phyicalvolume_config table, one row per unique path

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	LM's IP address
gsa_id	varchar(64)	Globally-unique identifier for this device
component_id	varchar(20)	Identifier of major component through which this path is accessed
path_device_name	varchar(64)	NAS server device name of the path this row in the table is pertaining to
array_wwpn	varchar(16)	Array WWPN
physical_device_name	varchar(64)	match a single entry in the physical_device_name column of the gsa_nas_physicalvolume_config table
ctrl_instance	varchar(20)	controller number associated with the path used to access the device
if_name	varchar(32)	HBA instance as referenced by the NAS server
target	int(4)	SCSI target the device is being accessed through
channel	varchar(8)	SCSI channel the device is being accessed through, "N/A" if not applicable
lun	int(4)	SCSI lun the device is being accessed through
path_status	varchar(16)	status of the path being reported
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 170 - gsa_nas_physicalvolume_path

gsa_nas_share

The primary purpose of a NAS device is to share out its storage, so this table is a key component of the agent.

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	varchar(15)	LM's ip address
gsa_id	varchar(64)	Globally-unique identifier for this device
share_type	varchar(16)	One of CIFS, NFS, FTP
share_name	varchar(255)	Name of the share
share_path	varchar(255)	-- CIFS, the "mount point" -- NFS and FTP, the same as "share_name" above
filesystem_name	varchar(255)	Filesystem containing the shared directory, to join with the gsa_nas_filesystem table
options	varchar(255)	share-specific options, including permissions and non-permission options
timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM
last_update	datetime(8)	Last update agg_gmt_timestamp
to_time	datetime(8)	Expiration agg_gmt_timestamp
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 171 - gsa_nas_share

Chapter Sixteen – Custom Reports

This chapter briefly describes some tables used to support the Custom Report Wizards and the Charting Wizards. Refer to the Management Console User's Guide for information on using the Report Wizards and Charting Wizards that allow you to create customized views and charts.

gsa_custom_report_choices

This table lists the logical groups of columns that are available to build custom reports.

Column Name	Datatype	Description
logical_grouping_id	int(4)	Provides a unique ID that identifies one charting wizard from another.
db_column_name	varchar(30)	Database column name
display_column	varchar(255)	Display column name
column_type	varchar(2)	'SS' String, 'NN' Numeric, 'DD' date, 'BB' Boolean, 'LN' Numeric-Picklist, 'LB' Boolean-Picklist, 'LS' String-Picklist, 'LD' Date-Picklist
constraint_flag	varchar(1)	'Y' if it can be constrained
data_source_tag	varchar(1)	This is a partial to full key into gsa_custom_report_tags

Table 172 - gsa_custom_report_choices

gsa_custom_report_cols

This table is used when a customized view is created to set the ordering of fields in the displayed view.

Column Name	Datatype	Description
logical_grouping_id	int(4)	Provides a unique ID that identifies one charting wizard from another.
report_id	int(4)	From gsa_custom_reports
ordering	int(4)	Used to order the columns
display_column	varchar(255)	User interface display name
db_column_name	varchar(30)	Database column name

Table 173 - gsa_custom_report_cols

gsa_custom_report_criteria

This table saves the where clause (filter criteria) for a user defined report.

Column Name	Datatype	Description
report_id	int	From gsa_custom_reports
ordering	int	Used to rebuild criteria
criteria	varchar(255)	Where clause
display_criteria	varchar(30)	Where clause seen on user interface

Table 174 –gsa_custom_report_cols

gsa_custom_report_order

This table stores the ordering for the columns specified in a user defined report.

Column Name	Datatype	Description
report_id	int	From gsa_custom_reports
ordering	int	How to order columns
ascending_flag	varchar(255)	'Y' ascending; 'N' descending
db_column_name	varchar(30)	Column name in database

Table 175 - custom_report_order

gsa_custom_report_tags

This table maps composite strings built from tags found in gsa_custom_report_choices to either a table or a view in the database that can be used for the report.

Column Name	Datatype	Description
logical_grouping_id	int	From gsa_custom_reports
data_source_tag	varchar(128)	Composite fork into gsa_custom_report_choices
db_data_source	varchar(30)	Defines the database table the wizard queries

Table 176 - custom_report_tags

gsa_custom_reports

This table is used by the custom report wizards. The column report_id is the primary key.

Column Name	Datatype	Description
report_id	int	Is a unique ID that identifies one wizard from another. Is used to link the wizard attributes in different tables together for the same wizard.
user_id	int	User Identifier.
logical_grouping_id	int	From gsa_custom_report_choices.
report_name	varchar(255)	Is the user-assigned report name.
distinct_flag	char(1)	
share_mode	char(1)	
chart_type	char(1)	Type of chart indicator
chart_title	varchar(128)	Chart title

Table 177 – gsa_custom_reports

gsa_custom_report_wizards

This table is used by the Management Console's Charting Wizards.

Column Name	Datatype	Description
logical_grouping_id	int(4)	Provides a unique ID that identifies one charting wizard from another.
wizard_window_title	varchar(255)	Defines the page title for Step 1 for each particular charting wizard.
wizard_step_title	varchar(255)	Defines the window title for all the steps for each particular wizard.
charting_flag	char(1)	N(o) or Y(ES)

Table 178 – gsa_custom_report_wizards

gsa_custom_chart_stat

This table contains the metadata that can used in the generation of the select clause of the SQL query for a custom chart. You access the Charting Wizards under the Assets pull-down menu on the Management Console Home Page.

Column Name	Datatype	Description
stat_id	int(4)	Unique identifier for the statistic (e.g., total number of files)
stat_name	varchar(32)	Statistic name
stat_expr	varchar(255)	Expresion in the Wizard (e.g., max(backed_up_kb)
stat_caption	varchar(32)	Caption (for above example, BKB(MAX)
stat_type	varchar(8)	
logical_grouping_id	int(4)	Provides a unique ID that identifies one charting wizard from another.

Table 179 - gsa_custom_chart_stat

gsa_performance_statistics

This table is populated by the Host Statistics Agent (GSMstats), which is used to collect metrics from the CPU, IO, and MEMORY of a backup server. The table is used to create custom reports and charts (e.g., using Host Performance Charting Wizard).

Column Name	Datatype	Description
acom_id	int(4)	Local Manager ID
ip_address	int(4)	IP address of installed agent.
system_type	varchar(50)	Defines the system type.
system_id	varchar(50)	Uniquely identifying name of system device resides on.
class	varchar(50)	The class of this device. (e.g. IO, MEMORY, CPU)

Column Name	Datatype	Description
subclass	varchar(50)	Sub-class of the device (e.g. SCSI, FIBRE).
device_type	varchar(50)	Specific type of device (e.g. TAPE, DISK).
instance	varchar(50)	Name of the device being monitored (e.g. DevRmt0).
stat_type	varchar(50)	What kind of statistic being measured (e.g. READ, WRITE).
collect_interval	int(4)	Configured interval to collect data.
start	datetime(8)	Start time of data collection in seconds.
end_time	datetime(8)	End time of data collection in seconds.
duration	int(4)	End time minus start time in seconds. A –1 indicates that the measurement is a snapshot in time. Status information is recorded this way. In this instance, the start and end times should be the same.
count_value	numeric(13)	Value (count) of the measurement being collected. The meaning of this value will change based on the unit column.
unit	varchar(50)	Defines how to interpret the results in the count column (e.g. BYTES, SECONDS).
timestamp	datetime(8)	Time when the row was inserted into the database.
agg_gmt_timestamp	datetime(8)	Poll time stamp (yy/mm/dd hh/mm/ss) AM/PM in GMT

Table 180 - gsa_performance_statistics

gsa_reservation

This table will store reservations associated with the use of the Storage Provisioning Wizard under the Provisioning pull-down menu on the Management Console Home Page. Refer to the *Management Console User's Guide to obtain* additional information on the Storage Provisioning Wizard.

Column Name	Datatype	Description
gsa_id	int(4)	
creation_gmt_time	datetime(8)	Timestamp of reservation's creation
expiration_gmt_time	datetime(8)	When the reservation expires
change_control	varchar(128)	
status	int(4)	Designates status (e.g., open)
user_name	varchar(20)	User name
user_id	int(4)	Internal group ID associated with the user

Table 181 - gsa_reservation

gsa_reservation_comment

This table will store comments defined in existing reservations. Refer to the *Sun Storagetek Business Analytics Administrator's Guide* for additional information on storage provisioning.

Column Name	Datatype	Description
gsa_id	int(4)	Unique ID generated by the application
creation_gmt_time	datetime(8)	Timestamp of reservation's creation
user_name	varchar(20)	User name
comment	varchar(255)	Comment text

Table 182 - gsa_reservation_comment