Telestream

Analytics User Guide

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Preface

This book describes installation, configuration, and operation of the Analytics application. This document is intended for the Telestream Installation Team, System Administrators, and system users.

Topics

Documentation Accessibility

For information about Telestream's commitment to accessibility, visit the Telestream Support Portal located at:

https://www.telestream.net/telestream-support/

Related Documents

For more information, see the TSCC Core documentation set for this release located at:

https://www.telestream.net/telestream-support/diva/support.htm

For information on Oracle Storage Cloud visit the following links.

For information regarding metered and non-metered accounts:
http://docs.oracle.com/en/cloud/get-started/subscriptions-cloud/csgsg/

For up to date Cloud information:
http://docs.oracle.com/cloud/latest/

For further assistance:
http://docs.oracle.com/cloud/latest/storagecs_common/index.html

Document Updates

The following table identifies updates made to this document.

Date	Update
May 2022	Updated Copyright information. Updated book for release 8.2. Migrated book to Telestream format Updated terminology to new standards (see the *Overview* for updated terms)
June 2022	Fixed footnote errors.
August 2022	Minor terminology updates.
September 2022	Minor formatting corrections. Updated terminology and title page graphic. Updated book for 8.3 release.
October 2022	Reverted the term *Virtual Object* to *Object*
December 2022	Updated book for 8.3.1 release.
January-September 2023	Updated book for release 9.0. Updated copyright dates.
September 2023	Name change to Content Conductor, publish 9.0
January 2024	Name change to DIVA, publish 9.0

Overview

This chapter describes an overview of the Analytics app, new and enhanced features and functionality, and includes the following information:

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Analytics App Overview

The Analytics App is a DIVA option that constantly monitors the digital storage infrastructure, and warns about media or tape drive degradation before it results in reduced performance or possible data loss. The Analytics App provides long term content protection, management, and security to DIVA.

The Analytics App features include:

- Continuous monitoring of tape drives and media
- Complete history of drive and media performance
- Full integration with DIVA
- Detailed Performance Analysis
- Preventive and corrective maintenance aid
- System Journal
- System Metrics

The Analytics App provides information regarding current and past performance numbers for various system components. The information can be used to project present and future system requirements based on various premises, and plan for appropriate system evolutions.

The Analytics App collects quality and performance data in real time within the archive environment. The information can also be used as an aid for selective migration of content, recycling of defective media, preventative hardware maintenance, network and storage system integrity, and content availability.

The Analytics App performs the following tasks:

- Gather operational facts from the following sources:
  - DIVA System (software components and equipment)
  - Platforms (servers and operating system)
  - Exchanged Data
- Process operational facts into metrics by sampling, filtering, normalizing, counting, and aggregating data.
- Maintain a view of the system's current and past performance.
- Collect and verify checksum data to expose disk and tape errors, and report disk, tape, and server failures.
- Assist in managing large volumes of data.
- Provide billing data for customers offering DIVA as a service to other customers.
- Predict operational conditions of interest (for example, end of life of a tape or a drive).
- Provide low-level diagnostic information to assist support staff investigations.

- Answer a broad range of questions about:
  - Optimal performance (what can the system deliver in an optimal context?).
  - Current performance (is the system performing at its best?).
- Causes of the current state. That is, what led to the current state. For example, how did so many tapes get consumed in the last month?
- History (for example, evolution of the capacity, throughput, activity, and so on).
- Possible solutions or adjustments (for example, what needs fixing or relocation, what should be replaced, what should be reconfigured, and so on).
- "What If" scenarios (that is, what is the impact of a proposed change in the system, capacity planning, and so on).
- Use of the system at various levels (DIVA system, DIVA component, job type, tape, library, tape drive, disk, collection, and so on) as a basis for billing (that is, who, what, when, how much, how many, how long).

Analytics App Principles of Operation

The primary purpose of the Analytics App is to collect operational data generated by activity in the archive system (Archive, Restore, Copy, Insert Tapes, and so on). Each activity generates events, for example, a `TAPE READ` or a `DELETE INSTANCE`. Events are collected in real time and stored in the database.

Each event has various information attached to it. For example, the size of a transfer, its duration, the Actor used, and so on. These are referred to as Event Parameters.

Metrics are generated and updated by processing event parameters using background jobs scheduled every hour. Event data can be broken down (`AGGREGATE`) according to various resources or attributes (for example, object name, tape barcode, storage device, and so on), and per hour, day, week, month, or year interval. No interval can also be used to collect a lifetime metric. Various aggregation functions are provided; for example, Count, Sum, and Average.

For example, the `TAPE_DRIVE_READ_WRITE_DAY` built-in metric sums the transfer sizes of `TAPE READ` and `TAPE WRITE` events and breaks down the values per device, and per day.

The Analytics App supports additional data retrieval such as DIVA Resource Statistics and Quick Response Data (QRD), detailed in the *Collecting Quick Response Data (QRD)* section. This data is processed separately and is not available in Metric Definitions.

New and Enhanced Features and Functionality

This section describes new and enhanced features and functionality. Refer to the DIVA Release Notes for detailed information.

Metrics

To standardize the Metric ID across all DIVA installations, all predefined metrics have a hard-coded Metric ID instead of using a database sequence. All user-defined metrics start with Metric ID 1001. The database upgrade scripts handle this migration for you during upgrades. If you already had any user-defined metrics, they are automatically assigned a new Metric ID starting with 1001.

Configuration

This chapter describes the Analytics App configuration, and includes the following information:

Topics

Note: The Analytics App main configuration tasks are not available in the initial DIVA release.

Analytics App Resources

The Web App includes configuration elements specific to the Analytics App as follows:

- Tape Drives

  The drive serial number can be edited in the Drive Edit dialog box. This is useful if the information was either not retrieved, or entered improperly, during a Sync DB process. The firmware of the drive is displayed in a uneditable field. The firmware information is obtained from the Actors when scanning for tape drive devices. This information is viewable in the Web App.

- Actors

  The Actors screen in the Web App displays the `First Used Date` in a uneditable field. This is located in the Web App on the Resource Management > Actors > Properties screen. There is no additional Analytics App configuration necessary for the Actors.

- Libraries

  The Configuration > Libraries > Robots page includes a Libraries section. When a library name is clicked, or the three dots to open the context menu, the user is taken to an editing page where there is an editable `Name` field to enter (or edit) the library description.An uneditable `First Utilization Date` field is located on the Resource Management > Libraries > First Utilization Date page. There is no additional Analytics App configuration necessary for the Managed Storage.

Configuring Analytics App Events and Metrics

The Event Definitions screen displays the list of event definitions available for use in the metrics. Event definitions are factory set and cannot be modified. See *Event Definitions* for a list of predefined event definitions.

Click an event definition to display a dialog box listing its associated parameters.

The Metric Definitions screen lists the available metrics. Built-in metrics (`DIVAPROTECT*` metrics) cannot be edited, and therefore do not appear in the Metric Definitions panel. See *Metric Definitions* for a list of predefined metric definitions.

Note: There is no metric definition configuration available in the initial DIVA release.

A description of the metric can be entered in the Description field displayed next to the Metric Name in the Metric Definitions panel. The description is also displayed in the Web App when the mouse is paused over an entry in the Metric Definition menu list.

The Enabled check box enables (selected) or disables (deselected) data collection for the metric.

The `Collection Type` fields specify which event parameter (for example, Transfer Size) is collected as the data, and the statistical computation operated on it (for example, Sum). The available statistics are as follows:

- `Average`
- `Count`
- `Maximum`
- `Minimum`
- `Sum`
- `Weight Based Average`

The `Weighted By` field specifies the divider parameter for `Weight Based Average` collection (for example, Duration).

The `Collected Event` list specifies the events from which the collected event parameter is retrieved. The list only displays event types suitable for the parameter specified in the second field for the `Collection Type`. Event types with no such parameter attached are absent from the listing.

The Resource menu list specifies which resource to use to break down the data. For example, if the Drive Serial Number is selected, the Analytics App generates separate metrics for each drive.

The `Interval` field specifies the interval for metric calculation. For example, selecting 1 Day generates a metric daily (if corresponding data is available). The metric calculation is based on the associated events that occurred in the last 24 hours.

Operations

The Analytics module is an analytical and monitoring option integrated into DIVA, bringing long-term content protection, management, and security to DIVA systems. The Analytics app includes reporting through the Journal using various metrics as described in the following sections. The following operational information is included in this chapter:

Topics

Collecting Operational Events

Operational events are the primary events collected by the Analytics App. The following three tables identify event fields and the types of events associated with them. There are three tables only due to the amount of entries. Locate the desired field on the top row of the table, and then follow down the column to identify which events are valid for the selected field.

Event	Event Type	Tape Type	Tape Barcode	Drive Type	Drive Name	Disk Name	Drive Serial Number	Library Serial Number	SD Name	Actor Name
TAPE_INSERT	Yes	Yes	Yes					Yes		
TAPE_INSERT_ERR	Yes							Yes		
TAPE_MOUNT	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
TAPE_MOUNT_ERR	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
TAPE_POSITION	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
TAPE_POSITION_ERR	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
TAPE_READ	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
TAPE_READ_ERR	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
TAPE_WRITE	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
TAPE_WRITE_ERR	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
DISK_READ[1]	Yes					Yes				Yes
DISK_READ_ERR[1]	Yes					Yes				Yes
DISK_WRITE[1]	Yes					Yes				Yes
DISK_WRITE_ERR[1]	Yes					Yes				Yes
SD_READ	Yes								Yes	Yes
SD_READ_ERR	Yes								Yes	Yes
SD_WRITE	Yes								Yes	Yes
SD_WRITE_ERR	Yes								Yes	Yes
TAPE_UNLOAD	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
TAPE_UNLOAD_ERR	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
TAPE_DISMOUNT	Yes	Yes	Yes	Yes	Yes		Yes	Yes		
TAPE_DISMOUNT_ERR	Yes	Yes	Yes	Yes	Yes		Yes	Yes		
TAPE_EJECT	Yes	Yes	Yes					Yes		
TAPE_EJECT_ERR	Yes	Yes	Yes					Yes		
END_OF_TAPE	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
TAPE_REPACK	Yes							Yes		
ARCHIVE_REQUEST	Yes								Yes	
COPY_REQUEST	Yes									

Event	Event Type	Tape Type	Tape Barcode	Drive Type	Drive Name	Disk Name	Drive Serial Number	Library Serial Number	SD Name	Actor Name
COPY_AS_REQUEST (to new)	Yes									
CREATE_INSTANCE	Yes									
RESTORE and PARTIAL_RESTORE	Yes								Yes	
DELETE_OBJECT	Yes									
DELETE_INSTANCE	Yes									
TRANSCODE_END	Yes									Yes
TRANSCODE_ERR	Yes									Yes
STOPPED_ON_CANCEL	Yes									
CHECKSUM_ERROR_TAPE	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes
CHECKSUM_ERROR_DISK	Yes					Yes				Yes
CHECKSUM_ERROR_SD	Yes								Yes	Yes
TAPE_IMPORT	Yes		Yes							
TAPE_EXPORT	Yes		Yes							

1. The transcoder work directory is not a DIVA disk. No DISK READ or DISK WRITE events are created when accessing this directory.

The presence of Optional in the following table indicates that it is optional. New Instance IDs are only generated after the final write to the destination media. Instance ID is not available in the following cases:

- Temporary instances created in cache disk by an Archive job
- `SD READ` or `SD WRITE` during the transcode phase of an archive when transferring to or from the transcoder work directory
- Cache `DISK READ` or `DISK WRITE` when performing a tape to tape Copy job
- Tape positioning before a tape write (Archive job)
- End Of Tape (EOT exception) encountered during an Archive job

Event	Object Name[1]	Object Collection[1]	Object Instance[1]	Media (Tape Group or Array)	Job ID	Event End Time	Event Duration	Transfer Size	Transfer Rate
TAPE_INSERT						Yes	Yes		
TAPE_INSERT_ERR				Yes		Yes			
TAPE_MOUNT				Yes		Yes	Yes		
TAPE_MOUNT_ERR				Yes		Yes			
TAPE_POSITION	Yes	Yes	Optional	Yes	Yes	Yes	Yes		
TAPE_POSITION_ERR	Yes	Yes	Optional	Yes	Yes	Yes			
TAPE_READ	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TAPE_READ_ERR	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
TAPE_WRITE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TAPE_WRITE_ERR	Yes	Yes		Yes	Yes	Yes		Yes	
DISK_READ[2]	Yes	Yes	Optional	Yes	Yes	Yes	Yes	Yes	Yes
DISK_READ_ERR[2]	Yes	Yes	Optional	Yes	Yes	Yes		Yes	
DISK_WRITE[2]	Yes	Yes	Optional	Yes	Yes	Yes	Yes	Yes	Yes
DISK_WRITE_ERR[2]	Yes	Yes		Yes	Yes	Yes		Yes	
SD_READ	Yes	Yes	Optional		Yes	Yes	Yes	Yes	Yes
SD_READ_ERR	Yes	Yes	Optional		Yes	Yes		Yes	
SD_WRITE	Yes	Yes	Optional		Yes	Yes	Yes	Yes	Yes
SD_WRITE_ERR	Yes	Yes			Yes	Yes		Yes	
TAPE_UNLOAD				Yes		Yes	Yes		
TAPE_UNLOAD_ERR				Yes		Yes			
TAPE_DISMOUNT				Yes		Yes	Yes		
TAPE_DISMOUNT_ERR				Yes		Yes			
TAPE_EJECT						Yes	Yes		
TAPE_EJECT_ERR						Yes			

Event	Object Name[1]	Object Collection[1]	Object Instance[1]	Media (Tape Group or Array)	Job ID	Event End Time	Event Duration	Transfer Size	Transfer Rate
END_OF_TAPE	Yes	Yes	Optional	Yes	Yes	Yes			
TAPE_REPACK					Yes	Yes			
ARCHIVE_REQUEST	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
COPY_REQUEST	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
COPY_AS_REQUEST (to new)	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
CREATE_INSTANCE	Yes		Yes	Yes	Yes	Yes		Yes	
RESTORE and PARTIAL_RESTORE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
DELETE_OBJECT	Yes	Yes			Yes	Yes			
DELETE_INSTANCE	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
TRANSCODE_END	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
TRANSCODE_ERR	Yes	Yes	Yes		Yes	Yes			
STOPPED_ON_CANCEL	Yes	Yes			Yes	Yes			
CHECKSUM_ERROR_TAPE	Yes	Yes	Optional	Yes	Yes	Yes			
CHECKSUM_ERROR_DISK	Yes	Yes	Optional	Yes	Yes	Yes			
CHECKSUM_ERROR_SD	Yes	Yes	Optional		Yes	Yes			
TAPE_IMPORT				Yes		Yes			
TAPE_EXPORT				Yes	Yes	Yes			

1. Object information is not provided for Repack jobs.
2. The transcoder work directory is not a DIVA disk. No `DISK READ` or `DISK WRITE` events are created when accessing this directory.

Event	Transfer Error Rate	Error Code	Error Message	Transcoder or Analyzer Name	Number of Archive Operations	Data Size
TAPE_INSERT						
TAPE_INSERT_ERR		Yes	Yes			
TAPE_MOUNT						
TAPE_MOUNT_ERR		Yes	Yes			
TAPE_POSITION						
TAPE_POSITION_ERR		Yes	Yes			
TAPE_READ	Yes					
TAPE_READ_ERR		Yes	Yes			
TAPE_WRITE	Yes					
TAPE_WRITE_ERR		Yes	Yes			
DISK_READ[1]						
DISK_READ_ERR[1]		Yes	Yes			
DISK_WRITE[1]						
DISK_WRITE_ERR[1]		Yes	Yes			
SD_READ						
SD_READ_ERR		Yes	Yes			
SD_WRITE						
SD_WRITE_ERR		Yes	Yes			
TAPE_UNLOAD						
TAPE_UNLOAD_ERR		Yes	Yes			
TAPE_DISMOUNT						
TAPE_DISMOUNT_ERR		Yes	Yes			
TAPE_EJECT						
TAPE_EJECT_ERR		Yes	Yes			
END_OF_TAPE						
TAPE_REPACK						
ARCHIVE_REQUEST					Yes	
COPY_REQUEST					Yes	
COPY_AS_REQUEST (to new)					Yes	
CREATE_INSTANCE						
RESTORE and PARTIAL_RESTORE					Yes	
DELETE_OBJECT						

Event	Transfer Error Rate	Error Code	Error Message	Transcoder or Analyzer Name	Number of Archive Operations	Data Size
DELETE_INSTANCE						
TRANSCODE_END				Yes		
TRANSCODE_ERR		Yes	Yes	Yes		
STOPPED_ON_CANCEL						
CHECKSUM_ERROR_TAPE						
CHECKSUM_ERROR_DISK						
CHECKSUM_ERROR_SD						
TAPE_IMPORT						Yes
TAPE_EXPORT						Yes

1. The transcoder work directory is not a DIVA disk. No `DISK READ` or `DISK WRITE` events are created when accessing this directory.

Collecting Hardware Resource Statistics

The Analytics App collects hardware information from the tape drives and direct-attached Managed Storage sent by the Actors. Managed Storage information is unavailable if a Managed Storage Server is used instead of direct-attached Managed Storage. The information, called Resource Statistics, is updated in real time in the Analytics App. The information is populated in the Drive Alert and Library Alert logs, and updates the tape drive's firmware information in the DIVA database. These special events are not available for use in Metric Definitions.

The following table lists the data sent by the Actors for each Quick Response Event type:

Event	Clean Alert[1]	Tension Alert[2]	Drive Alert	Drive Firmware	Library Alert
Time-stamp	X	X	X	X	X
Event ID	X	X	X	X	X
Request ID			X		
Drive Serial Num	X	X	X		
Library Serial Num					X
Tape Name (barcode)		X	X		
Tape Type		X			
Alert Log List[3]			X		X
Drive List[4]				X	

1. The Actor issues Clean Alerts when a drive indicates it needs cleaning. These alerts are typically trapped by the library, or the library server, and the cleaning process is handled by those components. For this reason, DIVA does not include a drive cleaning mechanism.
2. The Actor issues a Tension Alert when a drive indicates it requires re-tensioning.
3. The Alert Log List is a variable length list of tape drive or library alerts. Each alert includes a parameter, a severity, and a text message.
4. The Drive List is a variable length list of drive information objects. Each information object includes the Serial Number, Drive Name, and Firmware Release level. The Firmware Release level is saved in the database.

Collecting Quick Response Data (QRD)

The Analytics App maintains a set of statistics about the archive system resources called QRD (Quick Response Data). QRD is not based on events, it is calculated from information available in the DIVA database, and updated every hour through an automated database job.

The following is a list of the QRD available, listed by resource:

- Actors, Transcoders, and Analyzers

  The QRD collected for these resources is the `First Utilization Date`.

- Arrays

  The QRD collected for arrays is as follows:

  – `Total used space` - this is the exact sum of used space across all disks in the array, both online and offline.

  – `Total online object used space`

  – `Total externalized (offline) object used space`

- Disks

  The QRD collected for disks is as follows:

  – `First Utilization Date`

  – `Last Access`, `Last Read`, and `Last Write` dates

- Tape Groups

  The QRD collected for Tape Groups is as follows:

  – `Total used space` - this is the exact sum of used space across all disks in the array, both online and offline.

  – `Total online object used space`

  – `Total externalized (offline) object used space`

- Managed Storage

  The QRD collected for Managed Storage is as follows:

Note: A tape is considered offline only when it is ejected. After a tape is ejected it is not considered as part of the library.

  - First Utilization Date
  - Total number of tapes
  - Total number of Nearline (online) tapes
  - Total number of offline tapes
  - Total number of blank tapes
  - Total number of non-writable (write protected) tapes
  - Total data stored in library
  - Total data stored Nearline (online)
  - Total data stored offline
  - Total storage capacity (online and offline total)
  - Total Nearline (online) capacity
  - Total offline capacity
  - Total free space capacity (online and offline total)
  - Total number of objects archived to the tapes in the associated library
  - Total number of objects Nearline (online)
  - Total number of objects offline
- Media

  The QRD collected for media is as follows:
  - First utilization Date
  - Last Utilization Date
  - Used space - this is the sum of offline and online instance sizes.
- Objects

  The QRD collected for objects is the Last Read Date.
- Object Instances

  The QRD collected for object instances in the Last Verify Date.
- System

  The QRD collected for the system is the First Use Date.
- Server

  The QRD collected for Servers is the First utilization Date.
- Tapes

  The QRD collected for tapes is as follows:
  - First Insertion Date - this is the date it first appeared in the system.
  - First Utilization Date - this is the date it was first mounted.

Collecting Drive and Managed Storage Alert Logs

Drive and Managed Storage Alert Logs contain a history of the codes that have been generated by the hardware. The Actors read the codes during normal operation. The information is saved to the database whenever reported by the hardware.

The following table is an extract of the Sony SAIT-1 Tape Drive Specification. Refer to your manufacturer's manual for your particular hardware.

Code	Flag	Type	Client Message
01h	Read Warning	Warning	The drive is having problems reading data. No data has been lost, but there has been a reduction in the performance of the medium.
02h	Write Warning	Warning	The drive is having problems writing data. No data has been lost, but there has been a reduction in the capacity of the volume.
03h	Hard Error	Warning	The operation has stopped because an error has occurred while reading or writing data, which the drive cannot correct.
04h	Media	Critical	Your data is at risk: **1.** Copy any data you require from this cartridge. **2.** Do not use this tape again. **3.** Restart the operation with a different cartridge.

Collecting and Calculating Metrics

This section describes how metrics are collected and calculated.

Calculating Metrics Based on Operations Events

Metrics are calculated and updated through the TSCC Core Analytics Windows service. This service calls a set of stored procedures in the database. Each metric's calculation is based on a selection of Event Types (for example, `SD READ`, `SD WRITE`) from which a common event parameter is extracted (for example, `Transfer Size`), and processed by a statistical operation (for example, `Sum`). The metric takes into account events collected over a particular interval that depend on the `Metric Type`:

- `Hourly`
- `Daily`
- `Monthly`
- `Yearly`
- `Lifetime`

A Metric is calculated based on associated events that occurred within the previous hour. If none of the associated events occurred, the metric is not calculated nor

updated. If some associated events occurred, the metric is calculated or updated. All of the `Metric Types` are based upon these hourly calculations.

For example, if an associated event occurs at 10:00 AM on February 1st, 2023 the following Metrics (if they are defined) will be calculated or updated:

- 10:00 AM Hourly Metric
- 2/1/2023 Daily Metric
- February 2023 Monthly Metric
- 2023 Yearly Metric
- Lifetime Metric

The following is a list of collection types:

- `Sum Collection` Type

  This collection type calculates a metric by adding event parameter values.

- `Count Collection` Type

  This collection type calculates a metric by counting event parameter values.

- `Minimum Collection` Type

  This collection type calculates a metric using the minimum event parameter value.

- `Maximum Collection` Type

  This collection type calculates a metric using the maximum event parameter value.

- `Average Collection` Type

  This collection type calculates a metric by averaging the event parameter values.

- `Weight Base Average Collection` Type

  This collection type calculates a metric by dividing the sum of the event parameter values by a weight factor, in contrast to the standard average calculation being divided by the count of event parameter values. Metrics configured with this collection type must specify a weight factor, otherwise the following error is generated:

  ```
  ORA-20200 Weight Factor to calculate Weight based average is not
  mentioned.
  ```

The following is a sample Weight Based Average calculation:

- Metric Name

  `DIVA_CORE_SYSTEM_AVG_READ_WRITE_DAY`

- Collection Type

  `Weight Based Average`

- Collection Field

  `Transfer Size`

- Weight Factor

  `Duration`

- Calculation for Hourly Metrics

  SIZE (SUM of Transfer Size) / TIME (SUM of Transfer Duration) = V (Velocity)
- Calculation for Day, Month, Year and Lifetime Metrics

  SUM (Velocity * Time) / SUM (Time)

Calculating Built-in Metrics

The Analytics App includes built-in metrics that do not appear in the Web App, and cannot be edited. Built-in metrics names all start with `DIVAPROTECT`. The following are several of the built-in metrics. In each example, the first command is for daily counts, and the second command is for lifetime counts.

How many times was the Analytics App executed?

The following metrics count how many times the Analytics App has been executed. They update each time the Analytics App runs the hourly database job.

```
DIVAPROTECT_EXECUTION_COUNT_DAY
DIVAPROTECT_EXECUTION_COUNT
```

How many events did the Analytics App process?

The following metrics count how many events the Analytics App has processed while calculating metrics. They are updated each time the Analytics App processes an event.

```
DIVAPROTECT_EVENTS_PROCESSED_DAY
DIVAPROTECT_EVENTS_PROCESSED
```

How many metrics did the Analytics App process?

This defines how many metrics the Analytics App has calculated or updated. These metric values are updated each time a metric is calculated or updated in the DIVA system.

```
DIVAPROTECT_METRIC_PROCESSED_DAY
DIVAPROTECT_METRIC_PROCESSED
```

What is the number of the Analytics App internal errors?

The following metrics count the total number of the Analytics App errors that have occurred while calculating or updating a metric. They are updated each time an error occurs.

```
DIVAPROTECT_INTERNAL_ERROR_DAY
DIVAPROTECT_INTERNAL_ERROR_DAY
```

Monitoring Use and Statistics in the Web App

You can view the Analytics App Journal and Metrics through the Web App. Click the appropriate icon on the Analytics screen to display either the Journal View or Metrics View.

There are three distinct areas under the Troubleshooting menu item to view events as follows:

- Logged Events
- Drive Alert Logs
- Library Alert Logs

System Events (Journal)

The Analytics App metrics are continually gathered and written to a temporary table in the database. Once per hour the metrics are removed from the temporary table and committed to a permanent table. This is viewed in the Web App under Troubleshooting > Logged Events.

The Web App provides a set of filters to narrow down data retrieval, and a list view for the retrieved information. The view can be filtered by Event Definition, Drive Serial Number, Begin Date/Time, End Date/Time, and enter search keywords into the appropriate fields.

The view can be searched for a particular Barcode, Actor Name, Server, Object Collection, Object Instance Number, Error Code (including warnings, errors, and so on) and Error Message. Click the Filters button and select (or deselect) the checkbox next to each desired filter, then click Apply Filters to apply the selected filters and perform the search.

A previously used set of filters can be recalled using the Previous Queries list (located in the lower right corner of the Journal view). The menu list remembers the last 10 used filter sets.

The view uses a color chart to identify the severity of each event:

- Blue indicates information.
- Orange indicates a warning.
- Red indicates an error.

The columns displayed in the view are as follows:

- Severity

  This column displays the severity of the event.
- ID

  This column displays the ID used to identify the event internally.
- Job ID

  This column displays the Request ID associated with the event.

- Start Time

  This column displays the event start time.
- Event Time

  This column displays the time the event occurred.
- Duration

  This column displays the total duration of the event in seconds.
- Event

  This column displays the type of event.
- Tape Barcode

  This column displays the tape barcode associated with the event.
- Drive Serial Number

  This column displays the serial number of the drive associated with the event.
- Library Serial Number

  This column displays the serial number of the library associated with the event.
- Disk Name

  This column displays the name of the disk associated with the event.
- Actor Name

  This column displays the name of the Actor associated with the event.
- Server

  This column displays the name of the Server associated with the event.
- Object Name

  This column displays the name of the object associated with the event.
- Object Collection

  This column displays the Collection of the object associated with the event.
- Object Instance

  This column displays the instance number of the object associated with the event.
- Transfer Size

  This column displays the total data transfer size, in bytes, for the event.
- Transfer Rate

  This column displays the rate of transfer, in bytes, for the event.
- Error Rate

  This column displays the number of errors per gigabyte of data transferred. These errors are automatically recovered by the tape drive.
- Error Code

  This column displays the internal error code, when applicable, for the event.

- Error Message

  This column displays a standardized error message, when applicable, for the event.

Click any entry in the list to display its properties. A context menu is accessible for events specifically related to a job by clicking the entry in the Journal view. The context menu enables quickly navigating to the corresponding Logged Jobs view or Job Properties dialog box.

Library Alert Logs Information

The Library Alert Logs View lists errors reported by directly-attached, SCSI protocol Managed Storage. This information is vendor specific and varies depending on the library make and model.

This is viewed int he Web App under Troubleshooting > Library Alert Logs.

A set of filters is available to narrow down searches. The results can be filtered by Severity by selecting (display), or deselecting (do not display), the appropriate check box for Information, Warnings, and Critical Errors. The view can also be filtered by Message, Begin Date/Time, End Date/Time, and Alert ID.Click the Filter button on the top of the display to select the desired filters, then click Apply Filters to perform the search.

The columns displayed in the Library Alert Logs View are as follows:

- Severity

  This column displays the severity of the alert (Informational, Warning or Error).

- Date/Time

  This column displays the date and time of the occurrence.

- Alert ID

  This column displays the alert ID number as reported by the library, and is vendor specific.

- Message

  This column displays the message field as reported by the library, and is vendor specific.

Drive Alert Logs Information

The Drive Alert Logs View lists errors reported by tape drives. This information is vendor specific and varies depending on the make and model. A set of filters is available to narrow down searches. For example, instance errors are viewable related to a particular tape.

This is viewed in the Web App under Troubleshooting > Drive Alert Logs.

The results can be filtered by Severity by selecting (display), or deselecting (do not display), the appropriate check box for Information, Warnings, and Critical Errors. The view can also be filtered by Tape Barcode, Request ID, Begin Date/Time, End Date/Time,

and Alert ID, Drive Serial Number, and Message.Click the Filter button on the top of the display to select the desired filters, then click Apply Filters to perform the search

The columns displayed in the Drive Alert Logs View are as follows:

- Severity

  This column displays the severity of the alert (Informational, Warning or Error).

- Date/Time

  This column displays the date and time of the occurrence.

- Drive Serial Number

  This column displays the drive that reported the alert.

- Tape Barcode

  This column displays the barcode of the tape that was mounted when the alert was reported.

- Alert ID

  This column displays the alert ID number as reported by the library, and is vendor specific.

- Message

  This column displays the message field as reported by the library, and is vendor specific.

- DIVA Request ID

  This column displays the ID number of the job related to the alert (if applicable).

System Analytics (Metrics) Information

The Analytics App Metrics cannot currently be viewed in the Web App.

System QRD Information

System QRD includes the `First Utilization Date` and is displayed in the Information dialog box. Click DIVA Information on the Web App Analytics screen to access this information.

Server QRD Information

View the Server QRD information in the Web App Server View. The information includes the First Utilization Date.Click an entry in the list to display additional information.

Media QRD Information

View the Media QRD in the Web App Resources Management > Media menu. The metrics displayed in the Media View are as follows:

- `First Utilization Date`

  This displays the date and time the media was first mounted.

- `Last Utilization Date`

  This column displays the last date and time the media was used.

- `Used Space`

  This column displays the sum of the used space on all online and offline media.

Library QRD Information

View the Library QRD and Serial Numbers in the Web App Resources Management > Libraries menu. Clicking an entry in the list displays additional information in a dialog box.

The metrics displayed in the Library View are as follows:

Note: All offline values mentioned are not supported in this DIVA release. Currently, a tape is considered offline only when it is ejected. After a tape is ejected it is not considered to be part of the Library.

- `Type`

  This column displays the type of library.

- `First Utilization Date`

  This column displays the date and time the library was first used.

- `Total Tapes`

  This column displays the total number of tapes in the library.

- `Total Data Stored`

  This column displays the total amount of data stored in the library (in megabytes).

- `Total Capacity`

  This column displays the sum of the total capacity of all tapes in the library (in gigabytes).

- `Free Capacity`

  This column displays the sum of the total amount of free space on all tapes in the library (in gigabytes).

- `Total Objects`

  This column displays the sum of the total number of objects stored on all tapes in the library.

- `Total Objects Online`

  This column displays the sum of the total number of objects stored on all online tapes in the library.

- `Total Objects Offline`

  This column displays the sum of the total number of objects stored on all offline tapes in the library.

Extended Tape Drive QRD Information

View the Tape Drive QRD in the Web App Resources Management > Drives menu. This information includes drive Serial Numbers and Firmware level. The Serial Number is displayed in the main view.

Click a drive to display additional information on the Properties screen including the Firmware Level and other basic information about the drive. The Usage tab includes the following columns:

- Installation Date

  This column displays the date and time the drive was initially installed.

- First Utilization Date

  This column displays the date and time the drive was first mounted.

- Last Upgrade Date

  This column displays the date and time of the last drive upgrade.

- Last Cleaning Date

  This column displays the date and time of the last time the drive was cleaned.

Extended Tape QRD Information

View the Tape QRD in the Web App under the Resources Management > Tapes menu. Click the selected tape to open the Tape Properties page to view additional information.

The QRD fields (specifically) displayed in the Tape Properties page are as follows:

- First Insertion Date

  This field displays the date and time the tape was first inserted into the library.

- First Utilization Date

  This field displays the date and time the tape was first mounted.

Extended Disk QRD Information

View the Disk QRD in the Web App Resources Management > Disks menu.

The QRD information (specifically) displayed on the Disks screen are as follows:

- First Utilization Date

  This column displays the date and time the disk was first used.
- Last Access Date

  This column displays the last date and time the disk was accessed.
- Last Read Date

  This column displays the last time a read operation was performed on the disk.
- Last Write Date

  This column displays the last time a write operation was performed on the disk.

Extended Object and Object Instance Information TBD

View the Last Read Date (and time) for an object in the Web App on the Content Management > Catalog Browsing screen.

View the Last Verify Date for an object on the Content Management > Catalog Browsing page by clicking on the object to reveal the Object Properties screen.

Extended Actor Information

View extended information for the Actors on the Resources Management > Actors > Actor Properties screen in the Web App. Display the Actor Properties screen by clicking an Actor on the Actors screen.

The Actors screen contains the `First Utilization Date` field. This field displays the date and time when the selected Actor was first used.

The Transcoders are displayed on the Actor Properties screen and contains the following columns:

- Name

  This column displays the transcoder name.
- Version

  This column displays the transcoder release level.
- Type

  This column displays the transcoder type.
- First Utilization Date

  This column displays the date and time the transcoder was first used with the selected Actor.

The Analyzer tab in the Actor Properties dialog box contains the following fields:

- Version

  This field displays the analyzer release level.
- First Utilization Date

  This field displays the date and time the analyzer was first used.

Tracking Checksum Error Events

View Checksum Error Events on the Troubleshooting > Logged Events screen. The following table identifies the Checksum Event Types:

Event ID	Event Name	Event Description	Severity
180	CHECKSUM_ERROR_TAPE	A checksum verification produced an error reading for the tape.	2
181	CHECKSUM_ERROR_DISK	A checksum verification produced an error reading for the disk.	2
182	CHECKSUM_ERROR_SD	A checksum verification produced an error reading for the Server.	2

Frequently Asked Questions

This chapter contains frequently asked questions about the Analytics App, and includes the following information:

- How often are metrics updated?

  The Analytics App calculates and updates the data metrics every hour through the Analytics Windows Service running in the background.

- How is the Analytics App installed in a new DIVA installation?

  The Analytics App is automatically installed with DIVA; no additional installation is required.

- Can you choose not to install the Analytics App?

  You can choose not to install and run it by not installing and running the TSCC Core Analytics Windows Service. When the service is not started, statistics are not computed.

- Can the Analytics App be disabled?

  Yes, you can disable the Analytics App functionality by stopping the Analytics Windows service from running.

- How is Engineering Mode accessed?

  Engineering mode is not available in the web app or DIVA. Contact Technical Support for assistance as needed.

Event and Metric Definitions

The following tables identify the Analytics App event and metric definitions.

Topics

Event Field Definitions

The following table identifies the Analytics App Event Field Definitions:

Event Field ID	Displayed Name	Aggregatible Resource?	Collectible?	Type	Quantifier
1	Event ID	No	Yes	Number	
2	Event Definition ID	Yes	No	Number	
3	Tape Type	Yes	No	String	
4	Tape Barcode	Yes	No	String	
5	Drive Type	Yes	No	String	
6	Drive Name	Yes	No	String	
7	Drive Serial Number	Yes	No	String	
8	Actor Name	Yes	No	String	
9	Object Name	Yes	No	String	
10	Object Collection	Yes	No	String	
11	Object Instance	No	No	Number	
12	Media	Yes	No	String	
13	Request ID	No	No	Number	
14	Event End Time	No	No	Date	
15	Event Duration	No	Yes	Number	Seconds
16	Transfer Size	No	Yes	Number	Bytes
17	Transfer Rate	No	Yes	Number	Mbps
18	Transfer Error Rate	No	Yes	Number	Errors per GB
19	Error Code	Yes	No	Number	
20	Error Message	No	No	String	
21	Disk Name	Yes	No	String	
22	Library Serial Number	Yes	No	String	
23	SD Name	Yes	No	String	
24	Transcoder Name Analyzer Name	Yes	No	String	

Event Field ID	Displayed Name	Aggregatible Resource?	Collectible?	Type	Quantifier
25	Local TSCC Core System	Yes	No	String	
26	Number of Operations	No	Yes	Number	
27	EV_SIZE	No	Yes	Number	Bytes

Event Definitions

The following table identifies the Analytics App Event Definitions:

Event ID	Name	Description	Severity
1	TAPE_INSERT	Tape insert event	3
2	TAPE_INSERT_ERR	Tape insert error event	2
10	TAPE_MOUNT	Tape mount event	4
11	TAPE_MOUNT_ERR	Tape mount error event	2
20	TAPE_POSITION	Tape position event	4
21	TAPE_POSITION_ERR	Tape position error event	2
30	TAPE_READ	Tape read event	4
31	TAPE_READ_ERR	Tape read error event	2
40	TAPE_WRITE	Tape write event	4
41	TAPE_WRITE_ERR	Tape write error event	2
50	TAPE_DISMOUNT	Tape dismount event	4
51	TAPE_DISMOUNT_ERR	Tape dismount error event	2
60	TAPE_EJECT	Tape eject event	3
61	TAPE_EJECT_ERR	Tape eject error event	2
70	TAPE_UNLOAD	Tape unload event	4
71	TAPE_UNLOAD_ERR	Tape unload error event	2
72	TAPE_IMPORT	Tape import event	3
73	TAPE_EXPORT	Tape export event	3
80	TAPE_DRIVE_CLEAN_ALERT	Tape drive clean event	3
81	TAPE_DRIVE_TENSION_NOTIFY	Tape drive tension notify event	2
82	TAPE_DRIVE_LOG_ALERT	Tape drive log alert event	4

Event ID	Name	Description	Severity
83	TAPE_DRIVE_LIST	Tape drive list event	4
84	TAPE_END_OF_TAPE	End of tape event	4
90	TAPE_REPACK	Tape repack event	3
91	TAPE_REPACK_ERR	Tape repack error event	2
103	DISK_READ	Disk read event	4
104	DISK_READ_ERR	Disk read error event	2
105	DISK_WRITE	Disk write event	4
106	DISK_WRITE_ERR	Disk write error event	2
110	SD_READ	Server read event	4
111	SD_READ_ERR	Server read error event	2
112	SD_WRITE	Server write event	4
113	SD_WRITE_ERR	Server write error event	2
120	ARCHIVE_REQUEST	Archive Object event	4
122	COPY_REQUEST	Copy Instance event	4
124	COPY_AS_REQUEST	Copy As event	4
126	RESTORE	Restore Object event	4
130	DELETE_OBJECT	Delete Object event	4
132	CREATE_INSTANCE	Create Instance event	4
134	DELETE_INSTANCE	Delete Object Instance event	4
141	TRANSCODE_END	Transcode event	4
142	TRANSCODE_ERR	Transcode error event	2
160	REQUEST_STOP_ON_CANCEL	Job Cancel event	4
161	REQUEST_STOP_ON_INTERRUPT	Job Interrupt Event	4
170	LIBRARY_LOG_ALERT	Library Log alert event	4
180	CHECKSUM_ERROR_TAPE	Checksum verification error reading from tape	2
181	CHECKSUM_ERROR_DISK	Checksum verification error reading from disk	2
182	CHECKSUM_ERROR_SD	Checksum verification error reading from Server	2
190	PARTIAL_RESTORE	Partial File Restore event	4

Metric Definitions

The following list describes the DIVA metrics definitions. All listed metrics are enabled.

- ACTOR_READ_WRITE
  - Description: Actor - the amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Actor Name
  - Collection Interval: Lifetime
- ACTOR_READ_WRITE_ABORTED_NUMBER
  - Description: Actor - number of ABORTED READ and ABORTED WRITE operations with drives.
  - Events: TAPE_READ_ERR, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Actor Name
  - Collection Interval: Lifetime
- ACTOR_READ_WRITE_ABORTED_NUMBER_DAY
  - Description: Actor - number of ABORTED READ and ABORTED WRITE operations with drives.
  - Events: TAPE_READ_ERR, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Actor Name
  - Collection Interval: Day
- ACTOR_READ_WRITE_ABORTED_NUMBER_SD
  - Description: Actor - number of ABORTED READ and ABORTED WRITE operations with Server.
  - Events: SD_READ_ERR, SD_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Actor Name
  - Collection Interval: Lifetime

- ACTOR_READ_WRITE_ABORTED_NUMBER_SD_DAY
  - Description: Actor - number of ABORTED READ and ABORTED WRITE operations with Server.
  - Events: SD_READ_ERR, SD_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Actor Name
  - Collection Interval: Day
- ACTOR_READ_WRITE_DAY
  - Description: Actor - amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Actor Name
  - Collection Interval: Day
- ACTOR_READ_WRITE_MONTH
  - Description: Actor - amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Actor Name
  - Collection Interval: Month
- ACTOR_READ_WRITE_NUMBER
  - Description: Actor - number of READ and WRITE operations.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Actor Name
  - Collection Interval: Lifetime

- ACTOR_READ_WRITE_NUMBER_DAY
  - Description: Actor - number of READ and WRITE operations.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Actor Name
  - Collection Interval: Day
- ACTOR_READ_WRITE_NUMBER_MONTH
  - Description: Actor - number of READ and WRITE operations.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Actor Name
  - Collection Interval: Month
- ACTOR_TIME_ALL_OPERATION
  - Description: Actor - time in all operations.
  - Events: DISK_READ, DISK_READ_ERR, DISK_WRITE, DISK_WRITE_ERR, SD_READ, SD_READ_ERR, SD_WRITE, SD_WRITE_ERR, TAPE_END_OF_TAPE, TAPE_MOUNT_ERR, TAPE_POSITION, TAPE_POSITION_ERR, TAPE_READ, TAPE_READ_ERR, TAPE_UNLOAD, TAPE_UNLOAD_ERR, TAPE_WRITE, TAPE_WRITE_ERR
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Actor Name
  - Collection Interval: Lifetime
- ACTOR_TIME_ALL_OPERATION_DAY
  - Description: Actor - time in all operations.
  - Events: DISK_READ, DISK_READ_ERR, DISK_WRITE, DISK_WRITE_ERR, SD_READ, SD_READ_ERR, SD_WRITE, SD_WRITE_ERR, TAPE_END_OF_TAPE, TAPE_MOUNT_ERR, TAPE_POSITION, TAPE_POSITION_ERR, TAPE_READ, TAPE_READ_ERR, TAPE_UNLOAD, TAPE_UNLOAD_ERR, TAPE_WRITE, TAPE_WRITE_ERR
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration

  - Aggregation Field: Actor Name
  - Collection Interval: Day
- ACTOR_TIME_ALL_OPERATION_MONTH
  - Description: Actor - time in all operations.
  - Events: DISK_READ, DISK_READ_ERR, DISK_WRITE, DISK_WRITE_ERR, SD_READ, SD_READ_ERR, SD_WRITE, SD_WRITE_ERR, TAPE_END_OF_TAPE, TAPE_MOUNT_ERR, TAPE_POSITION, TAPE_POSITION_ERR, TAPE_READ, TAPE_READ_ERR, TAPE_UNLOAD, TAPE_UNLOAD_ERR, TAPE_WRITE, TAPE_WRITE_ERR
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Actor Name
  - Collection Interval: Month
- ACTOR_TIME_READ
  - Description: Actor - time in READ operations.
  - Events: DISK_READ, SD_READ, TAPE_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Actor Name
  - Collection Interval: Lifetime
- ACTOR_TIME_READ_DAY
  - Description: Actor - time in READ operations.
  - Events: DISK_READ, SD_READ, TAPE_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Actor Name
  - Collection Interval: Day
- ACTOR_TIME_READ_MONTH
  - Description: Actor - time in READ operations.
  - Events: DISK_READ, SD_READ, TAPE_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Actor Name

  - Collection Interval: Month
- ACTOR_TIME_WRITE
  - Description: Actor - time in WRITE operations.
  - Events: DISK_WRITE, SD_WRITE, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Actor Name
  - Collection Interval: Lifetime
- ACTOR_TIME_WRITE_DAY
  - Description: Actor - time in WRITE operations.
  - Events: DISK_WRITE, SD_WRITE, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Actor Name
  - Collection Interval: Day
- ACTOR_TIME_WRITE_MONTH
  - Description: Actor - time in WRITE operations.
  - Events: DISK_WRITE, SD_WRITE, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Actor Name
  - Collection Interval: Month
- DISK_AVG_TRANSFER_RATE_READ
  - Description: Disk - average transfer rate of READ.
  - Events: DISK_READ
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime

- DISK_AVG_TRANSFER_RATE_READ_DAY
  - Description: Disk - average transfer rate of READ.
  - Events: DISK_READ
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Disk Name
  - Collection Interval: Day
- DISK_AVG_TRANSFER_RATE_READ_MONTH
  - Description: Disk - average transfer rate of READ.
  - Events: DISK_READ
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- DISK_AVG_TRANSFER_RATE_WRITE
  - Description: Disk - average transfer rate of WRITE.
  - Events: DISK_WRITE
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime
- DISK_AVG_TRANSFER_RATE_WRITE_DAY
  - Description: Disk - average transfer rate of WRITE.
  - Events: DISK_WRITE
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Disk Name
  - Collection Interval: Day

- DISK_AVG_TRANSFER_RATE_WRITE_MONTH
  - Description: Disk - average transfer rate of WRITE.
  - Events: DISK_WRITE
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- DISK_CHECKSUM_FAILURE_COUNT_DAY
  - Description: Disk - checksum failure operations count.
  - Events: CHECKSUM_ERROR_DISK
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Day
- DISK_CHECKSUM_FAILURE_COUNT_MONTH
  - Description: Disk - checksum failure operations count.
  - Events: CHECKSUM_ERROR_DISK
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- DISK_NUMBER_READ
  - Description: Disk - total number of READ operations.
  - Events: DISK_READ, DISK_READ_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime

- DISK_NUMBER_READ_ABORTED
  - Description: Disk - total number of ABORTED READ operations.
  - Events: DISK_READ_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime
- DISK_NUMBER_READ_ABORTED_DAY
  - Description: Disk - total number of ABORTED READ operations.
  - Events: DISK_READ_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Day
- DISK_NUMBER_READ_ABORTED_MONTH
  - Description: Disk - total number of ABORTED READ operations.
  - Events: DISK_READ_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- DISK_NUMBER_READ_DAY
  - Description: Disk - total number of READ operations.
  - Events: DISK_READ, DISK_READ_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Day

- DISK_NUMBER_READ_MONTH
  - Description: Disk - total number of READ operations.
  - Events: DISK_READ, DISK_READ_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- DISK_NUMBER_WRITE
  - Description: Disk - total number of WRITE operations.
  - Events: DISK_WRITE, DISK_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime
- DISK_NUMBER_WRITE_ABORTED
  - Description: Disk - Total number of ABORTED WRITE operations.
  - Events: DISK_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime
- DISK_NUMBER_WRITE_ABORTED_DAY
  - Description: Disk - Total number of ABORTED WRITE operations.
  - Events: DISK_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Day

- DISK_NUMBER_WRITE_ABORTED_MONTH
  - Description: Disk - Total number of ABORTED WRITE operations.
  - Events: DISK_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- DISK_NUMBER_WRITE_DAY
  - Description: Disk - Total number of WRITE operations.
  - Events: DISK_WRITE, DISK_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Day
- DISK_NUMBER_WRITE_MONTH
  - Description: Disk - Total number of WRITE operations.
  - Events: DISK_WRITE, DISK_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- DISK_READ
  - Description: Disk - total amount of data READ.
  - Events: DISK_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime

- DISK_READ_DAY
  - Description: Disk - total amount of data READ.
  - Events: DISK_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Disk Name
  - Collection Interval: Day
- DISK_READ_MONTH
  - Description: Disk - total amount of data READ.
  - Events: DISK_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- DISK_TIME_ALL_OPERATION
  - Description: Disk - total time of all operations.
  - Events: DISK_READ, DISK_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime
- DISK_TIME_ALL_OPERATION_DAY
  - Description: Disk - total time of all operations.
  - Events: DISK_READ, DISK_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Disk Name
  - Collection Interval: Day

- DISK_TIME_ALL_OPERATION_MONTH
  - Description: Disk - total time of all operations.
  - Events: DISK_READ, DISK_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- DISK_TIME_READ
  - Description: Disk - total time of READ operations.
  - Events: DISK_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime
- DISK_TIME_READ_DAY
  - Description: Disk - total time of READ operations.
  - Events: DISK_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Disk Name
  - Collection Interval: Day
- DISK_TIME_READ_MONTH
  - Description: Disk - total time of READ operations.
  - Events: DISK_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Disk Name
  - Collection Interval: Month

- DISK_TIME_WRITE
  - Description: Disk - total time of WRITE operations.
  - Events: DISK_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime
- DISK_TIME_WRITE_DAY
  - Description: Disk - total time of WRITE operations.
  - Events: DISK_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Disk Name
  - Collection Interval: Day
- DISK_TIME_WRITE_MONTH
  - Description: Disk - total time of WRITE operations.
  - Events: DISK_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- DISK_WRITE
  - Description: Disk - total amount of data WRITE.
  - Events: DISK_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Disk Name
  - Collection Interval: Lifetime

- DISK_WRITE_DAY
  - Description: Disk - total amount of data WRITE.
  - Events: DISK_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Disk Name
  - Collection Interval: Day
- DISK_WRITE_MONTH
  - Description: Disk - total amount of data WRITE.
  - Events: DISK_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Disk Name
  - Collection Interval: Month
- SYSTEM_ACTIVE_ARCHIVE_NUMBER
  - Description: TSCC Core System - number of active Archive jobs.
  - Events: ARCHIVE_REQUEST
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_ACTIVE_ARCHIVE_NUMBER_DAY
  - Description: TSCC Core System - number of active Archive jobs.
  - Events: ARCHIVE_REQUEST
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day

- SYSTEM_ACTIVE_ARCHIVE_NUMBER_MONTH
  - Description: TSCC Core System - number of active Archive jobs.
  - Events: ARCHIVE_REQUEST
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month
- SYSTEM_ACTIVE_COPY_AS_NUMBER
  - Description: TSCC Core System - number of active Copy As New object jobs.
  - Events: COPY_AS_REQUEST
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_ACTIVE_COPY_AS_NUMBER_DAY
  - Description: TSCC Core System - number of active Copy As New object jobs.
  - Events: COPY_AS_REQUEST
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_ACTIVE_COPY_AS_NUMBER_MONTH
  - Description: TSCC Core System - number of active Copy As New object jobs.
  - Events: COPY_AS_REQUEST
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month

- SYSTEM_ACTIVE_COPY_NUMBER
  - Description: TSCC Core System - number of active Copy jobs.
  - Events: COPY_REQUEST
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_ACTIVE_COPY_NUMBER_DAY
  - Description: TSCC Core System - number of active Copy jobs.
  - Events: COPY_REQUEST
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_ACTIVE_COPY_NUMBER_MONTH
  - Description: TSCC Core System - number of active Copy jobs.
  - Events: COPY_REQUEST
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month
- SYSTEM_ACTIVE_RESTORE_NUMBER
  - Description: TSCC Core System - number of active Restore jobs.
  - Events: RESTORE
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime

- SYSTEM_ACTIVE_RESTORE_NUMBER_DAY
  - Description: TSCC Core System - number of active Restore jobs.
  - Events: RESTORE
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_ACTIVE_RESTORE_NUMBER_MONTH
  - Description: TSCC Core System - number of active Restore jobs.
  - Events: RESTORE
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Number of operations
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month
- SYSTEM_AVG_READ_WRITE
  - Description: TSCC Core System - average amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: WAVG
  - Weight Factor: Duration
  - Collection Field: Transfer Size
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_AVG_READ_WRITE_DAY
  - Description: TSCC Core System - average amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: WAVG
  - Weight Factor: Duration
  - Collection Field: Transfer Size
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day

- SYSTEM_AVG_READ_WRITE_MONTH
  - Description: TSCC Core System - average amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: WAVG
  - Weight Factor: Duration
  - Collection Field: Transfer Size
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month
- SYSTEM_NUMBER_OBJECT_ARCHIVE
  - Description: TSCC Core System - number of objects archived.
  - Events: ARCHIVE_REQUEST
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_NUMBER_OBJECT_ARCHIVE_DAY
  - Description: TSCC Core System - number of objects archived.
  - Events: ARCHIVE_REQUEST
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_NUMBER_OBJECT_ARCHIVE_MONTH
  - Description: TSCC Core System - number of objects archived.
  - Events: ARCHIVE_REQUEST
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month

- SYSTEM_NUMBER_OBJECT_CREATED
  - Description: TSCC Core System - number of objects created.
  - Events: ARCHIVE_REQUEST, COPY_AS_REQUEST
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_NUMBER_OBJECT_CREATED_DAY
  - Description: TSCC Core System - number of objects created.
  - Events: ARCHIVE_REQUEST, COPY_AS_REQUEST
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_NUMBER_OBJECT_CREATED_MONTH
  - Description: TSCC Core System - number of objects created.
  - Events: ARCHIVE_REQUEST, COPY_AS_REQUEST
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month
- SYSTEM_NUMBER_OBJECT_DELETED
  - Description: TSCC Core System - number of objects deleted.
  - Events: DELETE_OBJECT
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime

- SYSTEM_NUMBER_OBJECT_DELETED_DAY
  - Description: TSCC Core System - number of objects deleted.
  - Events: DELETE_OBJECT
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_NUMBER_OBJECT_DELETED_MONTH
  - Description: TSCC Core System - number of objects deleted.
  - Events: DELETE_OBJECT
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month
- SYSTEM_NUMBER_OBJECT_INSTANCE_COPY
  - Description: TSCC Core System - number of objects instance copied.
  - Events: COPY_REQUEST
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_NUMBER_OBJECT_INSTANCE_COPY_DAY
  - Description: TSCC Core System - number of objects instance copied.
  - Events: COPY_REQUEST
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day

- SYSTEM_NUMBER_OBJECT_INSTANCE_COPY_MONTH
  - Description: TSCC Core System - number of objects instance copied.
  - Events: COPY_REQUEST
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month
- SYSTEM_NUMBER_OBJECT_INSTANCE_CREATED
  - Description: TSCC Core System - number of object instances created.
  - Events: CREATE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_NUMBER_OBJECT_INSTANCE_CREATED_DAY
  - Description: TSCC Core System - number of object instances created.
  - Events: CREATE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_NUMBER_OBJECT_INSTANCE_CREATED_MONTH
  - Description: TSCC Core System - number of object instances created.
  - Events: CREATE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month

- SYSTEM_NUMBER_OBJECT_INSTANCE_DELETED
  - Description: TSCC Core System - number of object instances deleted.
  - Events: DELETE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_NUMBER_OBJECT_INSTANCE_DELETED_DAY
  - Description: TSCC Core System - number of object instances deleted.
  - Events: DELETE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_NUMBER_OBJECT_INSTANCE_DELETED_MONTH
  - Description: TSCC Core System - number of object instances deleted.
  - Events: DELETE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_NUMBER_OBJECT_RESTORE
  - Description: TSCC Core System - number of objects restored.
  - Events: RESTORE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime

- SYSTEM_NUMBER_OBJECT_RESTORE_DAY
  - Description: TSCC Core System - number of objects restored.
  - Events: RESTORE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_NUMBER_OBJECT_RESTORE_MONTH
  - Description: TSCC Core System - number of objects restored.
  - Events: RESTORE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month
- SYSTEM_READ_WRITE
  - Description: TSCC Core System - amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_READ_WRITE_ABORTED_NUMBER
  - Description: TSCC Core System - number of ABORTED READ and ABORTED WRITE operations.
  - Events: DISK_READ_ERR, DISK_WRITE_ERR, SD_READ_ERR, SD_WRITE_ERR, TAPE_READ_ERR, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime

- SYSTEM_READ_WRITE_ABORTED_NUMBER_DAY
  - Description: TSCC Core System - number of ABORTED READ and ABORTED WRITE operations.
  - Events: DISK_READ_ERR, DISK_WRITE_ERR, SD_READ_ERR, SD_WRITE_ERR, TAPE_READ_ERR, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_READ_WRITE_ABORTED_NUMBER_MONTH
  - Description: TSCC Core System - number of ABORTED READ and ABORTED WRITE operations.
  - Events: DISK_READ_ERR, DISK_WRITE_ERR, SD_READ_ERR, SD_WRITE_ERR, TAPE_READ_ERR, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month
- SYSTEM_READ_WRITE_DAY
  - Description: TSCC Core System - amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_READ_WRITE_MONTH
  - Description: TSCC Core System - amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month

- SYSTEM_READ_WRITE_NUMBER
  - Description: TSCC Core System - number of READ and WRITE operations.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- SYSTEM_READ_WRITE_NUMBER_DAY
  - Description: TSCC Core System - number of READ and WRITE operations.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Day
- SYSTEM_READ_WRITE_NUMBER_MONTH
  - Description: TSCC Core System - number of READ and WRITE operations.
  - Events: DISK_READ, DISK_WRITE, SD_READ, SD_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Month
- MEDIA_ARCHIVED_OBJECT_DATASIZE_DAY
  - Description: Media - data size of all objects archived.
  - Events: ARCHIVE_REQUEST
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Media Name
  - Collection Interval: Day

- MEDIA_ARCHIVED_OBJECT_DATASIZE_MONTH
  - Description: Media - data size of all objects archived.
  - Events: ARCHIVE_REQUEST
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Media Name
  - Collection Interval: Month
- MEDIA_OBJECT_INSTANCE_CREATE
  - Description: Media - number of object instance CREATE.
  - Events: CREATE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Lifetime
- MEDIA_OBJECT_INSTANCE_CREATE_DAY
  - Description: Media - number of object instance CREATE.
  - Events: CREATE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Day
- MEDIA_OBJECT_INSTANCE_CREATE_MONTH
  - Description: Media - number of object instance CREATE and DELETE.
  - Events: CREATE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Month

- MEDIA_OBJECT_INSTANCE_DELETE
  - Description: Media - number of object instance DELETE.
  - Events: DELETE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Lifetime
- MEDIA_OBJECT_INSTANCE_DELETE_DAY
  - Description: Media - number of object instance DELETE.
  - Events: DELETE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Day
- MEDIA_OBJECT_INSTANCE_DELETE_MONTH
  - Description: Media - number of object instance CREATE and DELETE.
  - Events: DELETE_INSTANCE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Month
- MEDIA_READ_WRITE
  - Description: Media - amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Media Name
  - Collection Interval: Lifetime

- MEDIA_READ_WRITE_DAY
  - Description: Media - amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Media Name
  - Collection Interval: Day
- MEDIA_READ_WRITE_MONTH
  - Description: Media - amount of data READ and WRITE.
  - Events: DISK_READ, DISK_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Media Name
  - Collection Interval: Month
- MEDIA_READ_WRITE_NUMBER
  - Description: Media - number of READ and WRITE operations.
  - Events: DISK_READ, DISK_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Lifetime
- MEDIA_READ_WRITE_NUMBER_DAY
  - Description: Media - number of READ and WRITE operations.
  - Events: DISK_READ, DISK_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Day

- MEDIA_READ_WRITE_NUMBER_MONTH
  - Description: Media - number of READ and WRITE operations.
  - Events: DISK_READ, DISK_WRITE, TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Month
- MEDIA_RESTORE_OBJECT_DATASIZE_DAY
  - Description: Media - data size of all objects restored.
  - Events: RESTORE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Media Name
  - Collection Interval: Day
- MEDIA_RESTORE_OBJECT_DATASIZE_MONTH
  - Description: Media - data size of all objects restored.
  - Events: RESTORE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Media Name
  - Collection Interval: Month
- MEDIA_TAPE_EXPORT_NUMBER_DAY
  - Description: Media - Number of tape EXPORT.
  - Events: TAPE_EXPORT
  - Operation: count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Day

- MEDIA_TAPE_EXPORT_NUMBER_MONTH
  - Description: Media - Number of tape EXPORT.
  - Events: TAPE_EXPORT
  - Operation: count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Month
- MEDIA_TAPE_IMPORT_NUMBER_DAY
  - Description: Media - Number of tape IMPORT.
  - Events: TAPE_IMPORT
  - Operation: count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Day
- MEDIA_TAPE_EXPORT_NUMBER_MONTH
  - Description: Media - Number of tape IMPORT.
  - Events: TAPE_IMPORT
  - Operation: count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Media Name
  - Collection Interval: Month
- SD_ARCHIVE_OBJECT_DATASIZE_DAY
  - Description: Server - data size of all objects archived.
  - Events: ARCHIVE_REQUEST
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Server Name
  - Collection Interval: Day

- SD_ARCHIVE_OBJECT_DATASIZE_MONTH
  - Description: Server - data size of all objects archived.
  - Events: ARCHIVE_REQUEST
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Server Name
  - Collection Interval: Month
- SD_CHECKSUM_FAILURE_COUNT_DAY
  - Description: Server - checksum failure operations count.
  - Events: CHECKSUM_ERROR_SD
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Server Name
  - Collection Interval: Day
- SD_READ
  - Description: Server - amount of data READ.
  - Events: SD_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Server Name
  - Collection Interval: Lifetime
- SD_READ_DAY
  - Description: Server - amount of data READ.
  - Events: SD_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Server Name
  - Collection Interval: Day

- SD_READ_MONTH
  - Description: Server - amount of data READ.
  - Events: SD_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Server Name
  - Collection Interval: Month
- SD_READ_NUMBER
  - Description: Server - number of READ operations.
  - Events: SD_READ
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Server Name
  - Collection Interval: Lifetime
- SD_READ_NUMBER_DAY
  - Description: Server - number of READ operations.
  - Events: SD_READ
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Server Name
  - Collection Interval: Day
- SD_READ_NUMBER_MONTH
  - Description: Server - number of READ operations.
  - Events: SD_READ
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Server Name
  - Collection Interval: Month

- SD_RESTORE_OBJECT_DATASIZE_DAY
  - Description: Server - data size of all objects restore.
  - Events: RESTORE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Server Name
  - Collection Interval: Day
- SD_RESTORE_OBJECT_DATASIZE_MONTH
  - Description: Server - data size of all objects restore.
  - Events: RESTORE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Server Name
  - Collection Interval: Month
- SD_TIME
  - Description: Server - time in operation.
  - Events: SD_READ, SD_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Server Name
  - Collection Interval: Lifetime
- SD_TIME_DAY
  - Description: Server - time in operation.
  - Events: SD_READ, SD_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Server Name
  - Collection Interval: Day

- SD_TIME_MONTH
  - Description: Server - time in operation.
  - Events: SD_READ, SD_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Server Name
  - Collection Interval: Month
- SD_WRITE
  - Description: Server - amount of data WRITE.
  - Events: SD_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Server Name
  - Collection Interval: Lifetime
- SD_WRITE_DAY
  - Description: Server - amount of data WRITE.
  - Events: SD_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Server Name
  - Collection Interval: Day
- SD_WRITE_MONTH
  - Description: Server - amount of data WRITE.
  - Events: SD_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Server Name
  - Collection Interval: Month

- SD_WRITE_NUMBER
  - Description: Server - number of WRITE operations.
  - Events: SD_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Server Name
  - Collection Interval: Lifetime
- SD_WRITE_NUMBER_DAY
  - Description: Server - number of WRITE operations.
  - Events: SD_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Server Name
  - Collection Interval: Day
- SD_WRITE_NUMBER_MONTH
  - Description: Server - number of WRITE operations.
  - Events: SD_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Server Name
  - Collection Interval: Month
- TAPE_CHECKSUM_FAILURE_COUNT_DAY
  - Description: Tape - checksum failure operations count.
  - Events: CHECKSUM_ERROR_TAPE, TAPE_DISMOUNT_ERR, TAPE_MOUNT_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Tape Barcode
  - Collection Interval: Day

- TAPE_DRIVE_DATA_RATE
  - Description: Tape Drive - data rate
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Day
- TAPE_DRIVE_DATA_RATE_MONTH
  - Description: Tape Drive - data rate
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Month
- TAPE_DRIVE_ERROR_RATE
  - Description: Tape Drive - internal error rate.
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Error Rate
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Day
- TAPE_DRIVE_ERROR_RATE_MONTH
  - Description: Tape Drive - internal error rate.
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Error Rate
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Month

- TAPE_DRIVE_LAST_OPERATION_DATE
  - Description: Tape Drive - date of last MOUNT, DISMOUNT, READ, or WRITE.
  - Events: TAPE_DISMOUNT, TAPE_MOUNT, TAPE_READ, TAPE_WRITE
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Event Time
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Lifetime
- TAPE_DRIVE_NUMBER_MOUNTS
  - Description: Tape Drive - number of mounts.
  - Events: TAPE_MOUNT
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Lifetime
- TAPE_DRIVE_NUMBER_MOUNT_DISMOUNT_ABORTED
  - Description: Tape Drive - number of terminated MOUNT and DISMOUNT operations (together).
  - Events: TAPE_DISMOUNT_ERR, TAPE_MOUNT_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Lifetime
- TAPE_DRIVE_NUMBER_READ_WRITE_ABORTED
  - Description: Tape Drive - number of terminated READ and WRITE operations (together).
  - Events: TAPE_READ_ERR, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Lifetime

- TAPE_DRIVE_NUMBER_READ_WRITE_ABORTED_DAY
  - Description: Tape Drive - number of terminated READ and WRITE operations (together).
  - Events: TAPE_READ_ERR, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Day
- TAPE_DRIVE_NUMBER_READ_WRITE_ABORTED_MONTH
  - Description: Tape Drive - number of terminated READ and WRITE operations (together).
  - Events: TAPE_READ_ERR, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Month
- TAPE_DRIVE_OPERATION_TOTAL_TIME
  - Description: Tape Drive - total time of drive operation.
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Lifetime
- TAPE_DRIVE_OPERATION_TOTAL_TIME_DAY
  - Description: Tape Drive - total time of drive operation.
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Day

- TAPE_DRIVE_READ_WRITE
  - Description: Tape Drive - amount of data READ and WRITE (together).
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Lifetime
- TAPE_DRIVE_READ_WRITE_DAY
  - Description: Tape Drive - amount of data READ and WRITE (together).
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Day
- TAPE_DRIVE_READ_WRITE_MONTH
  - Description: Tape Drive - amount of data READ and WRITE (together).
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Month
- TAPE_DRIVE_READ_WRITE_NUMBER
  - Description: Tape Drive - number of READ and WRITE operations (together).
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Lifetime

- TAPE_DRIVE_READ_WRITE_NUMBER_DAY
  - Description: Tape Drive - number of READ and WRITE operations (together).
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Day
- TAPE_DRIVE_READ_WRITE_NUMBER_MONTH
  - Description: Tape Drive - number of READ and WRITE operations (together).
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Month
- TAPE_DRIVE_TIME_ALL_OPERATION
  - Description: Tape Drive - time in all operations.
  - Events: TAPE_DISMOUNT, TAPE_EJECT, TAPE_INSERT, TAPE_MOUNT, TAPE_POSITION, TAPE_READ, TAPE_UNLOAD, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Lifetime
- TAPE_DRIVE_TIME_ALL_OPERATION_DAY
  - Description: Tape Drive - time in all operations.
  - Events: TAPE_DISMOUNT, TAPE_EJECT, TAPE_INSERT, TAPE_MOUNT, TAPE_POSITION, TAPE_READ, TAPE_UNLOAD, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Day

- TAPE_DRIVE_TIME_ALL_OPERATION_MONTH
  - Description: Tape Drive - time in all operations.
  - Events: TAPE_DISMOUNT, TAPE_EJECT, TAPE_INSERT, TAPE_MOUNT, TAPE_POSITION, TAPE_READ, TAPE_UNLOAD, TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Month
- TAPE_DRIVE_TIME_READ
  - Description: Tape Drive - time in READ operation.
  - Events: TAPE_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Lifetime
- TAPE_DRIVE_TIME_READ_DAY
  - Description: Tape Drive - time in READ operation.
  - Events: TAPE_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Day
- TAPE_DRIVE_TIME_READ_MONTH
  - Description: Tape Drive - time in READ operation.
  - Events: TAPE_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Month

- TAPE_DRIVE_TIME_WRITE
  - Description: Tape Drive - time in WRITE operation.
  - Events: TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Lifetime
- TAPE_DRIVE_TIME_WRITE_DAY
  - Description: Tape Drive - time in WRITE operation.
  - Events: TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Day
- TAPE_DRIVE_TIME_WRITE_MONTH
  - Description: Tape Drive - time in WRITE operation.
  - Events: TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Drive Serial Number
  - Collection Interval: Month
- TAPE_EXTERNALIZATION_NUMBER
  - Description: Tape - number of externalizations.
  - Events: TAPE_EJECT
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Tape Barcode
  - Collection Interval: Lifetime

- TAPE_LAST_DISMOUNT
  - Description: Tape - date of last DISMOUNT.
  - Events: TAPE_DISMOUNT
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Event Time
  - Aggregation Field: Tape Barcode
  - Collection Interval: Lifetime
- TAPE_LAST_EVENT_ID
  - Description: Tape - the Analytics App Event ID of the last Tape or Drive operation.
  - Events: TAPE_DISMOUNT, TAPE_DISMOUNT_ERR, TAPE_MOUNT, TAPE_MOUNT_ERR, TAPE_POSITION, TAPE_POSITION_ERR, TAPE_READ, TAPE_READ_ERR, TAPE_UNLOAD, TAPE_UNLOAD_ERR, TAPE_WRITE, TAPE_WRITE_ERR
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Tape Barcode
  - Collection Interval: Lifetime
- TAPE_LAST_MOUNT_DATE
  - Description: Tape - date of last MOUNT.
  - Events: TAPE_MOUNT
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Event Time
  - Aggregation Field: Tape Barcode
  - Collection Interval: Lifetime
- TAPE_LAST_READ
  - Description: Tape - date of last READ.
  - Events: TAPE_READ
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Event Time
  - Aggregation Field: Tape Barcode
  - Collection Interval: Lifetime

- TAPE_LAST_WRITE
  - Description: Tape - date of last WRITE.
  - Events: TAPE_WRITE
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Event Time
  - Aggregation Field: Tape Barcode
  - Collection Interval: Lifetime
- TAPE_LIBRARY_NUMBER_DISMOUNT_ABORTED
  - Description: Tape Library - total number of ABORTED DISMOUNT operations.
  - Events: TAPE_DISMOUNT_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Lifetime
- TAPE_LIBRARY_NUMBER_DISMOUNT_ABORTED_DAY
  - Description: Tape Library - total number of ABORTED DISMOUNT operations.
  - Events: TAPE_DISMOUNT_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Day
- TAPE_LIBRARY_NUMBER_DISMOUNT_ABORTED_MONTH
  - Description: Tape Library - total number of ABORTED DISMOUNT operations.
  - Events: TAPE_DISMOUNT_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Month

- TAPE_LIBRARY_NUMBER_MOUNT
  - Description: Tape Library - total number of MOUNT operations.
  - Events: TAPE_MOUNT
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Lifetime
- TAPE_LIBRARY_NUMBER_MOUNT_ABORTED
  - Description: Tape Library - total number of ABORTED MOUNT operations.
  - Events: TAPE_MOUNT_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Lifetime
- TAPE_LIBRARY_NUMBER_MOUNT_ABORTED_DAY
  - Description: Tape Library - total number of ABORTED MOUNT operations.
  - Events: TAPE_MOUNT_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Day
- TAPE_LIBRARY_NUMBER_MOUNT_ABORTED_MONTH
  - Description: Tape Library - total number of ABORTED MOUNT operations.
  - Events: TAPE_MOUNT_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Month

- TAPE_LIBRARY_NUMBER_MOUNT_DAY
  - Description: Tape Library - total number of MOUNT operations.
  - Events: TAPE_MOUNT
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Day
- TAPE_LIBRARY_NUMBER_MOUNT_MONTH
  - Description: Tape Library - total number of MOUNT operations.
  - Events: TAPE_MOUNT
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Month
- TAPE_LIBRARY_NUMBER_READ
  - Description: Tape Library - total number of READ operations.
  - Events: TAPE_READ, TAPE_READ_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Lifetime
- TAPE_LIBRARY_NUMBER_READ_DAY
  - Description: Tape Library - total number of READ operations.
  - Events: TAPE_READ, TAPE_READ_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Day

- TAPE_LIBRARY_NUMBER_READ_MONTH
  - Description: Tape Library - total number of READ operations.
  - Events: TAPE_READ, TAPE_READ_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Month
- TAPE_LIBRARY_NUMBER_WRITE
  - Description: Tape Library - total number of WRITE operations.
  - Events: TAPE_WRITE, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Lifetime
- TAPE_LIBRARY_NUMBER_WRITE_DAY
  - Description: Tape Library - total number of WRITE operations.
  - Events: TAPE_WRITE, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Day
- TAPE_LIBRARY_NUMBER_WRITE_MONTH
  - Description: Tape Library - total number of WRITE operations.
  - Events: TAPE_WRITE, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Library Serial Number
  - Collection Interval: Month

- TAPE_LIBRARY_READ
  - Description: Tape Library - total amount of data READ operations.
  - Events: TAPE_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Library Serial Number
  - Collection Interval: Lifetime
- TAPE_LIBRARY_READ_DAY
  - Description: Tape Library - total amount of data READ operations.
  - Events: TAPE_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Library Serial Number
  - Collection Interval: Day
- TAPE_LIBRARY_READ_MONTH
  - Description: Tape Library - total amount of data READ operations.
  - Events: TAPE_READ
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Library Serial Number
  - Collection Interval: Month
- TAPE_LIBRARY_WRITE
  - Description: Tape Library - total amount of data WRITE operations.
  - Events: TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Library Serial Number
  - Collection Interval: Lifetime

- TAPE_LIBRARY_WRITE_DAY
  - Description: Tape Library - total amount of data WRITE operations.
  - Events: TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Library Serial Number
  - Collection Interval: Day
- TAPE_LIBRARY_WRITE_MONTH
  - Description: Tape Library - total amount of data WRITE operations.
  - Events: TAPE_WRITE
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Library Serial Number
  - Collection Interval: Month
- TAPE_MOUNT_DISMOUNT_NUMBER
  - Description: Tape - number of MOUNT and DISMOUNT operations (together).
  - Events: TAPE_DISMOUNT, TAPE_MOUNT
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Tape Barcode
  - Collection Interval: Lifetime
- TAPE_MOUNT_NUMBER
  - Description: Tape - number of MOUNT operations.
  - Events: TAPE_MOUNT
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Tape Barcode
  - Collection Interval: Lifetime

- TAPE_READ_WRITE_ABORTED_NUMBER
  - Description: Tape - number of aborted READ and WRITE operations (together).
  - Events: TAPE_READ_ERR, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Tape Barcode
  - Collection Interval: Lifetime
- TAPE_READ_WRITE_ABORTED_NUMBER_DAY
  - Description: Tape - number of aborted READ and WRITE operations (together).
  - Events: TAPE_READ_ERR, TAPE_WRITE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Tape Barcode
  - Collection Interval: Day
- TAPE_READ_WRITE_NUMBER
  - Description: Tape - number of READ and WRITE operations.
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Tape Barcode
  - Collection Interval: Lifetime
- TAPE_READ_WRITE_NUMBER_DAY
  - Description: Tape - number of READ and WRITE operations.
  - Events: TAPE_READ, TAPE_WRITE
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Tape Barcode
  - Collection Interval: Day

- TAPE_REPACK_NUMBER
  - Description: Tape - number of REPACK, REUSE and REFORMAT operations (together).
  - Events: TAPE_REPACK
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Local TSCC Core System
  - Collection Interval: Lifetime
- TRANSCODE_ABORTED_NUMBER
  - Description: Transcoder - number ABORTED TRANSCODE operations.
  - Events: TRANSCODE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Lifetime
- TRANSCODE_ABORTED_NUMBER_DAY
  - Description: Transcoder - number ABORTED TRANSCODE operations.
  - Events: TRANSCODE_ERR
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Day
- TRANSCODE_AVG_DATA
  - Description: Transcoder - average amount of data transcoded.
  - Events: TRANSCODE_END
  - Operation: Weighted Average
  - Weight Factor: Duration
  - Collection Field: Transfer Size
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Lifetime

- TRANSCODE_AVG_DATA_DAY
  - Description: Transcoder - average amount of data transcoded.
  - Events: TRANSCODE_END
  - Operation: Weighted Average
  - Weight Factor: Duration
  - Collection Field: Transfer Size
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Day
- TRANSCODE_AVG_THROUGHPUT
  - Description: Transcoder - average transcoding throughput.
  - Events: TRANSCODE_END
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Lifetime
- TRANSCODE_AVG_THROUGHPUT_DAY
  - Description: Transcoder - average transcoding throughput.
  - Events: TRANSCODE_END
  - Operation: Average
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Day
- TRANSCODE_DATA
  - Description: Transcoder - amount of data transcoded.
  - Events: TRANSCODE_END
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Lifetime

- TRANSCODE_DATA_DAY
  - Description: Transcoder - amount of data transcoded.
  - Events: TRANSCODE_END
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Day
- TRANSCODE_DATA_MONTH
  - Description: Transcoder - amount of data transcoded.
  - Events: TRANSCODE_END
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Transfer Size
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Month
- TRANSCODE_MAX_THROUGHPUT
  - Description: Transcoder - maximum transcoding throughput.
  - Events: TRANSCODE_END
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Lifetime
- TRANSCODE_MAX_THROUGHPUT_DAY
  - Description: Transcoder - maximum transcoding throughput.
  - Events: TRANSCODE_END
  - Operation: Maximum
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Day

- TRANSCODE_MIN_THROUGHPUT
  - Description: Transcoder - minimum transcoding throughput.
  - Events: TRANSCODE_END
  - Operation: Minimum
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Lifetime
- TRANSCODE_MIN_THROUGHPUT_DAY
  - Description: Transcoder - minimum transcoding throughput.
  - Events: TRANSCODE_END
  - Operation: Minimum
  - Weight Factor: Null
  - Collection Field: Transfer Rate
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Day
- TRANSCODE_NUMBER
  - Description: Transcoder - number of TRANSCODE operations.
  - Events: TRANSCODE_END
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Lifetime
- TRANSCODE_NUMBER_DAY
  - Description: Transcoder - number of TRANSCODE operations.
  - Events: TRANSCODE_END
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Day

- TRANSCODE_NUMBER_MONTH
  - Description: Transcoder - number of TRANSCODE operations.
  - Events: TRANSCODE_END
  - Operation: Count
  - Weight Factor: Null
  - Collection Field: Event ID
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Month
- TRANSCODE_TIME
  - Description: Transcoder - time in TRANSCODE operation.
  - Events: TRANSCODE_END
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Lifetime
- TRANSCODE_TIME_DAY
  - Description: Transcoder - time in TRANSCODE operation.
  - Events: TRANSCODE_END
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Day
- TRANSCODE_TIME_MONTH
  - Description: Transcoder - time in TRANSCODE operation.
  - Events: TRANSCODE_END
  - Operation: Sum
  - Weight Factor: Null
  - Collection Field: Duration
  - Aggregation Field: Transcoder Name or Analyzer Name
  - Collection Interval: Month

Default Configuration Parameters

The default the Analytics App configuration parameters are as follows:

Parameter	Default	Values
DIVA: Enable/Disable Analytics App Data Collection	Enabled	Enabled or Disabled
DIVA: Size Triggering Event Queue DB Flush (number of events)	100	Integer
DIVA: Time Delay Triggering Event Queue DB Flush (seconds)	15	Integer
Conf Utility GUI: Enable/Disable Analytics App Configuration	Enabled	Enabled or Disabled
DB: Maximum possible history of Events in Months	12	Integer
DB: Maximum possible number of Metrics	1,000,000	Integer