



Xgig Analyzer

Traffic Summary View Mini-Guide

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Introduction to Traffic Summary View

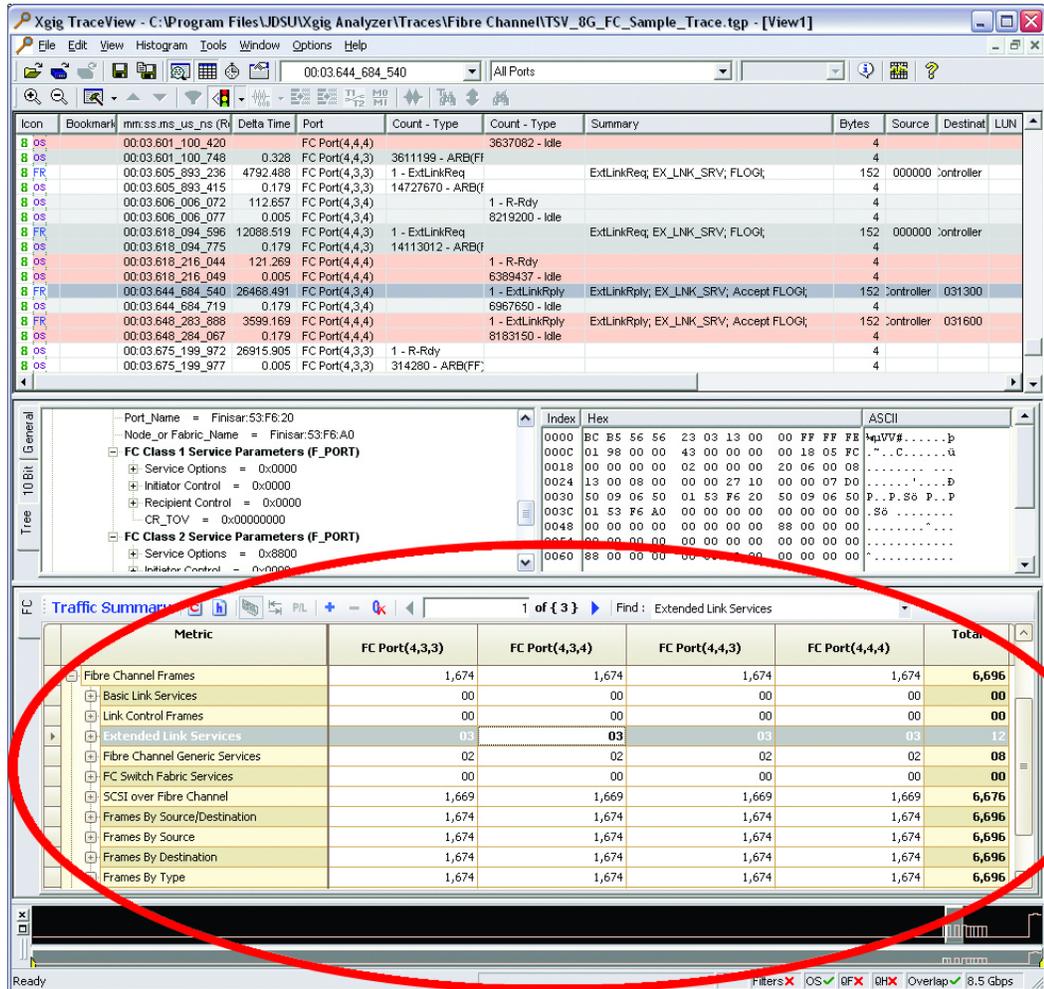
Xgig Analyzer has a view which you can navigate the Fibre Channel trace data — Traffic Summary View (TSV). TSV presents a hierarchal quantization of events, frames, control characters and hardware errors. Within each category, TSV allows expanding each tree category down to the unique protocol element types that make it up. It also provides the statistics information on primitives, frames, order sets, delimiters and hardware errors.

SAS/SATA TSV supports OOB signaling, primitives, error event types, frames, connections, and transaction event types, as well as navigation between each counter and associated events in the trace. A separate column shows the count for each port, link, and total for all links wherever it is applicable. Clicking upon any metric within the tree synchronizes all other views to the first instance of that metric, thus making TSV an efficient way to quickly move between unique protocol events.

Upon capturing a trace, TraceControl directs the blade to generate Traffic Summary View data. The TSV data remains within the hardware as long as the trace data remains there.

When extracting all or part of a trace with TSV enabled, the resulting trace will also save the relevant TSV data. If a trace does not contain TSV data, Trace View will disallow (grey out) the TSV option in TraceView's View menu.

New Fibre Channel TSV View in Xgig TraceView



Referring to the following illustration for the following features:

- A** To navigate to an event on a particular port, click on the (nonzero) count for that event within the port. The Dword and Spreadsheet views will scroll to the point in time at which that event first occurs.
- B** Clicking on a count within a port column will synchronize the views to the first event encountered within either of the unidirectional ports that makes up that port pair.
- C** Clicking on a count within the Total column will synchronize the views to the first event encountered within all of the ports within the domain.

Navigation using Ports and Totals within the TSV Window

The screenshot shows the Xgig TraceView interface. At the top, a table lists traffic entries with columns for Port, Count, Type, and Bytes. Below this is a 'Traffic Summary' window showing a table of metrics for different FC ports. A red box highlights the 'Traffic Summary' window, and three arrows labeled A, B, and C point to specific cells in the table.

Metric	FC Port(4,3,3)	FC Port(4,3,4)	FC Port(4,4,3)	FC Port(4,4,4)	Total
Fibre Channel Frames	1,674	1,674	1,674	1,674	6,696
Basic Link Services	00	00	00	00	00
Link Control Frames	00	00	00	00	00
Extended Link Services	03	03	03	03	12
Fibre Channel Generic Services	02	02	02	02	08
FC Switch Fabric Services	00	00	00	00	00
SCSI over Fibre Channel	1,669	1,669	1,669	1,669	6,676
Frames By Source/Destination	1,674	1,674	1,674	1,674	6,696
Frames By Source	1,674	1,674	1,674	1,674	6,696
Frames By Destination	1,674	1,674	1,674	1,674	6,696
Frames By Type	1,674	1,674	1,674	1,674	6,696

Filtering TSV Entries with Zero Values

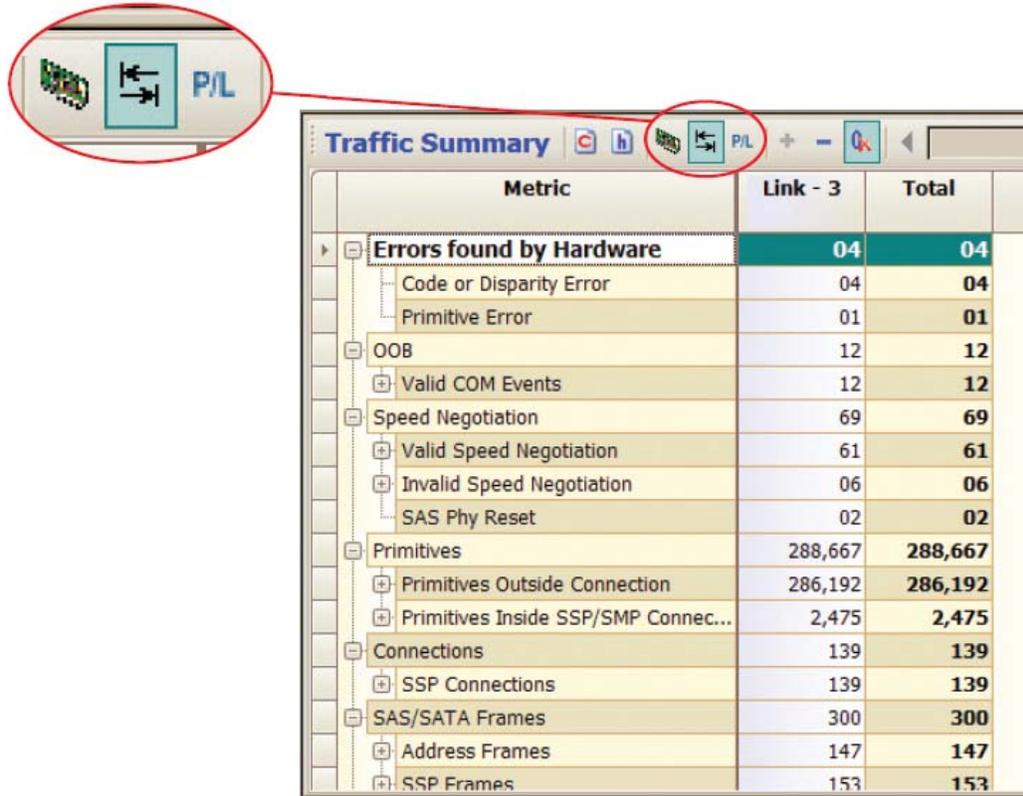
Traffic Summary View will show all unique protocol element types, zero or otherwise, by default. To limit the entries to just those containing non-zero data, press the “Hide Zero Entries” button. This option will hide non-zero data regardless of other options selected.

The screenshot shows the Xgig TraceView interface with the 'Traffic Summary' window open. A red circle highlights the 'Hide Zero Entries' button in the top right corner of the window. A red box highlights the 'Traffic Summary' window, and a red circle highlights the 'Hide Zero Entries' button. A red arrow points from the button to a small icon of the button.

Metric	FC Port(4,3,3)	FC Port(4,3,4)	FC Port(4,4,3)	FC Port(4,4,4)	Total
Fibre Channel Frames	1,674	1,674	1,674	1,674	6,696
Extended Link Services	03	03	03	03	12
Fibre Channel Generic Services	02	02	02	02	08
SCSI over Fibre Channel	1,669	1,669	1,669	1,669	6,676
Frames By Source/Destination	1,674	1,674	1,674	1,674	6,696
Frames By Source	1,674	1,674	1,674	1,674	6,696
Frames By Destination	1,674	1,674	1,674	1,674	6,696
Frames By Type	1,674	1,674	1,674	1,674	6,696
Frames By Class of Service	1,674	1,674	1,674	1,674	6,696
Frames By Sequence Type	1,674	1,674	1,674	1,674	6,696
Frame Delimiters	3,348	3,348	3,348	3,348	13,392

Filtering TSV Entries Via Ports, Links, or Both

Traffic Summary View allows filtering via ports, links, or both simultaneously with three selectable options. (The Total column is always active regardless of selection.)



Select this option to only show entries via ports.
(unidirectional, host-to-target and target-to-host)



Select this option to only show entries via links.
(bidirectional, to-and-from both host and target)



Select this option to show both ports and links
simultaneously.

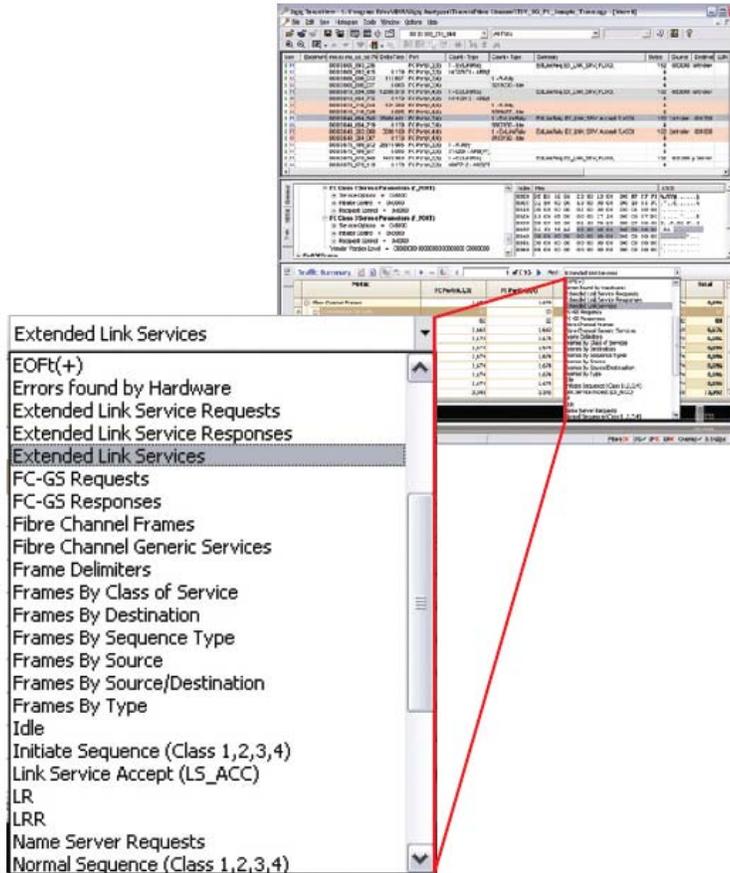


NOTE

For Fibre Channel, only entries via ports are available.

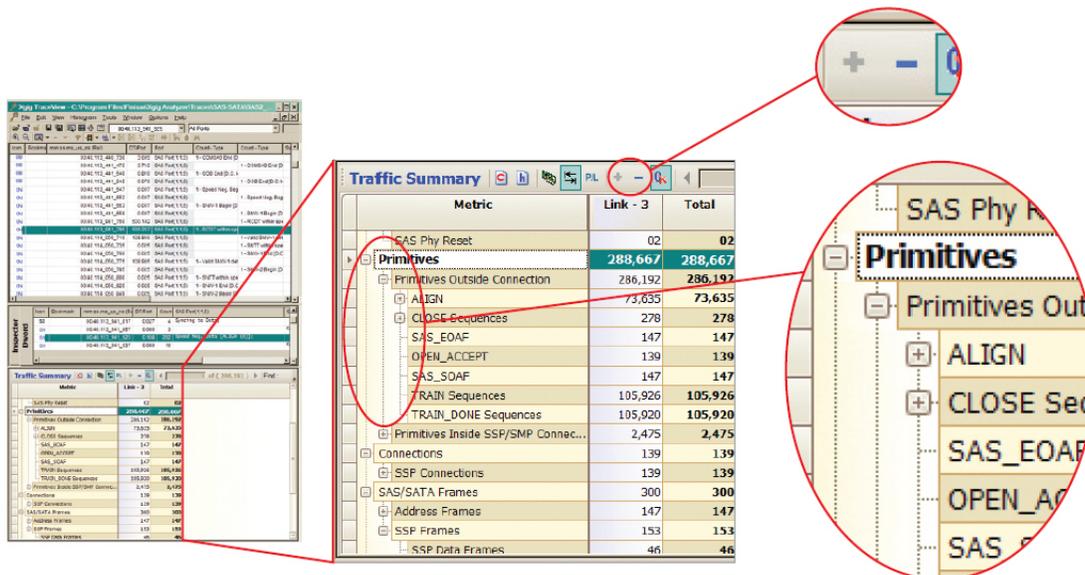
Navigating TSV Via the Find Menu

Traffic Summary View allows navigating entries via its Find Menu in addition to its Tree View. Located on the right side of TSV, the drop-down list shows all protocol types alphabetically. Selecting any entry will highlight that metric in the Tree View. It will synchronize the Dword and Spreadsheet views to the first entry of the type selected if that type's count is non-zero. When "Hide Zero Entries" is active, the Find Menu will show only types with non-zero counts.



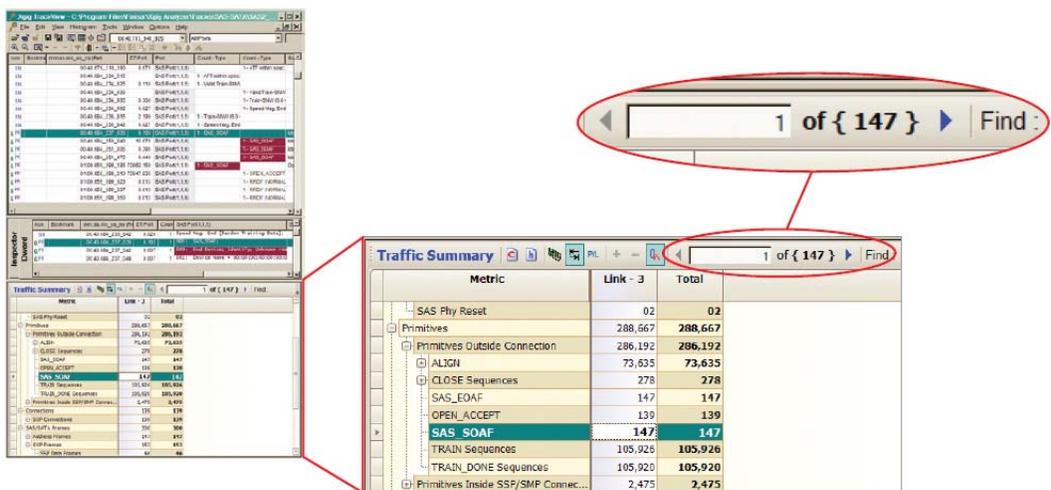
Expanding and Collapsing the TSV Tree View

To expand or collapse TSV Tree View levels, press either the plus or minus selections on the TSV menu to expand or collapse, respectively, the currently selected Tree View branch. Alternatively, press the plus or minus signs on any Tree View entry to expand or collapse that branch's view.



Navigating Between TSV Entry Occurrences

TSV allows navigation between event occurrences via its previous (blue back arrow or F11) and next (blue forward arrow or F12) occurrence controls. If the value of the metric is zero, the buttons and menu items are grayed out. If the current location is the first/last occurrence, the control grays out the back/forward button and previous/next menu items, respectively.*



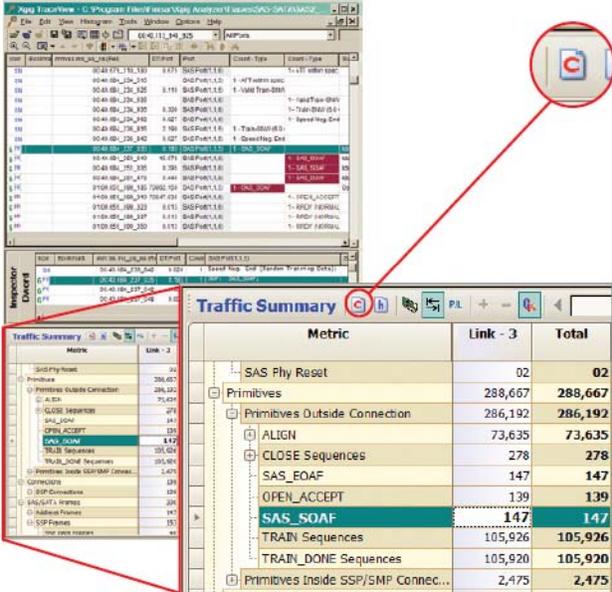
The Event Number text box within the Previous/Next Occurrence control area allows direct specification of the occurrence number for the currently selected metric. Typing a number between 1 and the total number of occurrences (to the right of the text box) syncs the Spreadsheet and Dword Views to the occurrence's numbered location within the trace.

* Navigating between entry occurrences may sometime increment or decrement by more than one due to repeat counts.

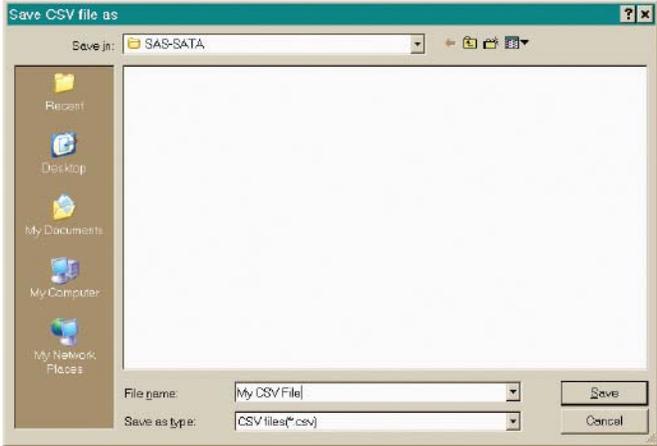
Creating a .csv File Within TSV

TSV allows creation of a summary of traffic statistics as a Comma Separated Value (.csv) file. This report will contain all metrics and columns. The resulting CSV files can be imported into other applications, such as Microsoft Excel.

Step 1: Select “Create .csv file” within the TSV menu.

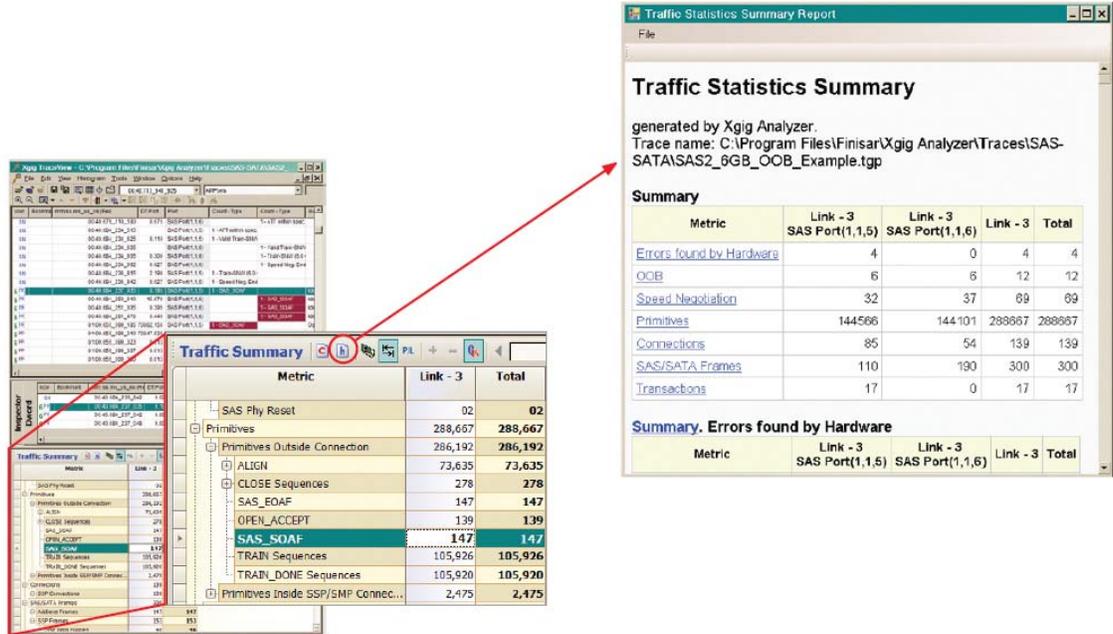


Step 2: Specify the filename for the .csv file.



Creating a TSV Traffic Summary Report

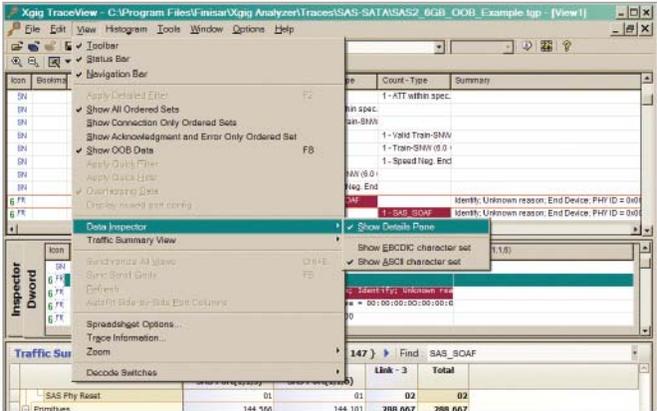
TSV allows production of a Traffic Statistics Summary as an HTML report. The report contains all filtered metrics and columns. Hyperlinks within the report jump to their respective report locations. Once created, the File menu within the Traffic Statistics Summary Report allows saving the report to a file.



Disabling Traffic Summary Information

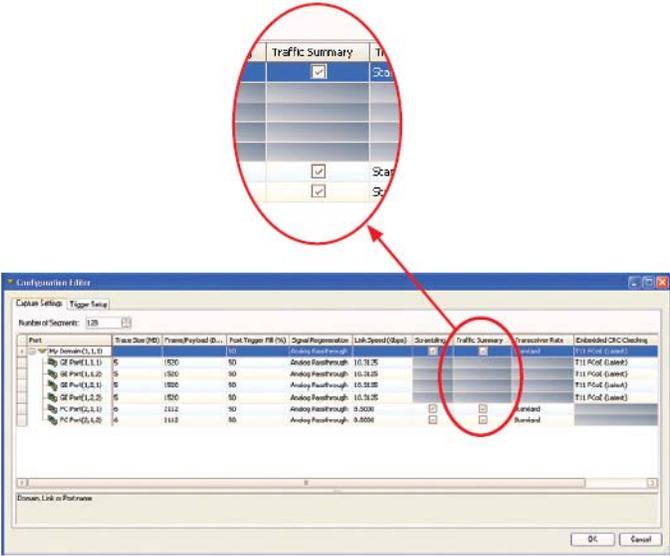
Removing Traffic Summary View (TSV) within TraceView

To stop generating TSV information by default within traces, uncheck the Traffic Summary option within TraceControl.



Disabling Traffic Summary Generation within TraceControl

To remove the Traffic Summary View within TraceView, uncheck the “Show Pane” option within View/Traffic Summary View.



Technical Assistance

If you require technical assistance, call 1-844-GO-VIAVI (1-844-468-4284) or e-mail Techsupport-snt@viavisolutions.com.

For the latest TAC information, go to <http://www.viavisolutions.com/en/services-and-support/support/technical-assistance>.



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