# Intelligent and Flexible Reporting Through Xgig® Expert Report View

The Viavi Xgig monitoring and analysis platform gives users a whole new perspective on network visibility. Xgig is the industry's leading network analysis tool suite, with the Xgig Analyser providing 100% real-time capture at full line-rate and the industry's largest trace buffer (4Gbytes per port). Complimenting the hardware suite is Xgig Expert, the Viavi trace analysis software which performs more than 1800 metrics and 1200 analysis functions across protocols.

These tools provide developers with complete visibility into network behavior, and many network issues can be readily identified using the trace data collected, ranging from link imbalances to performance degradation to unexpected failures. However, even the most simple tests can result in gigabytes of captured trace data. These huge trace files contain everything developers need to identify, locate, and resolve network impairments, but without a way to intelligently organise all this information, developers will find themselves unable to uncover even the most obvious of problems.

## Unparalleled Visibility with Report View

Viavi recognises the need for flexible and customisable reporting mechanisms that eliminate tedious and time-consuming manual analysis of traces. To simplify this process, Viavi created the Report View in Xgig Expert software, a table-based reporting tool which:

- Provides detailed performance metrics of components and the overall network through comprehensive trace analysis
- Highlights pending exchanges, enabling powerful troubleshooting capabilities
- Quickly compiles an overview of the entire system and its current levels of performance and health
- Compares performance among Initiators and/ or Targets to locate components that are performing under expectation
- Creates standard and custom reports
- Compares reports with configurable thresholds to expose a wide range of network behaviors for analysis
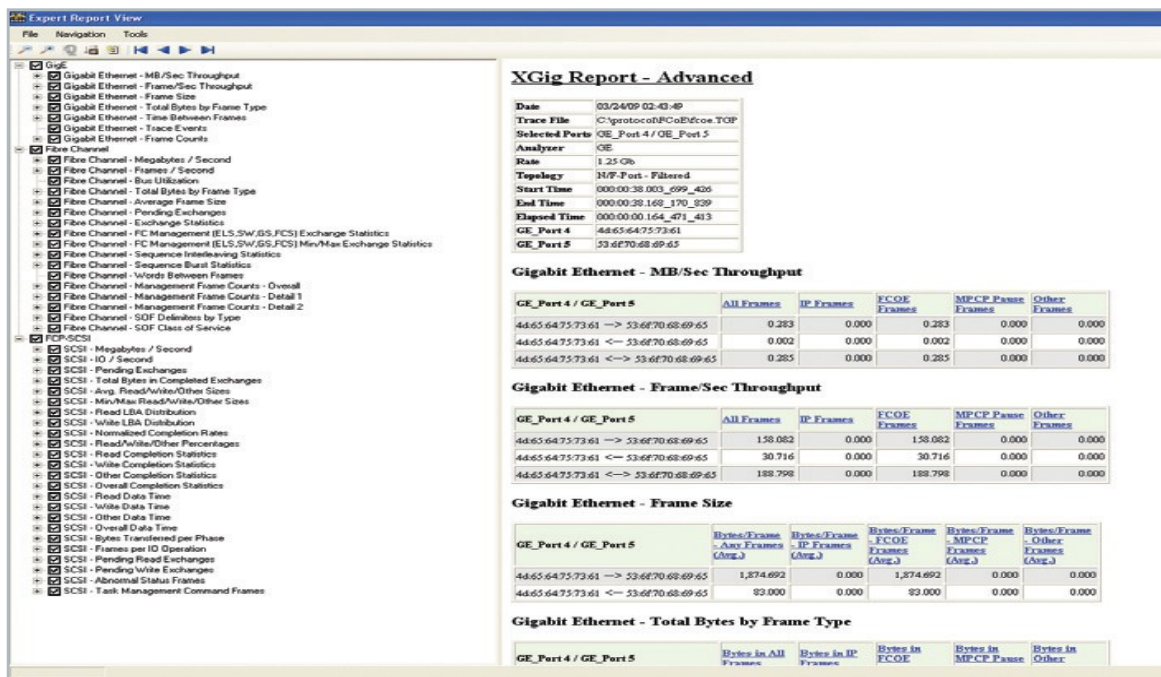


*Figure 1: : The Xgig Monitoring and Analysis platform is the industry standard for network analysis. Report View intelligently organizes the data collected by the Xgig tools so that developers can quickly identify, locate, and resolve network impairments.*

Report View organises a wealth of information in a flexible and customisable manner and users can switch back and forth between the current trace view and most recently generated report. Compared to Graph View that is already available in Expert, Report View collects information as a complete analysis of the entire trace without the sample breakdown used in Graph View. For this reason, values presented in Report View more accurately reflect the trace as a whole and are therefore better suited for use in detailed statistical analysis. In addition, Report View can:

- Track multiple port pairs simultaneously
- Focus on a single device or group of devices
- Report on specific protocols

- Provide details for each valid device pair combination as well as automatically calculate summation metrics

Report View was designed with ease-of-use in mind and its advanced functionality facilitates the intelligent formatting of reports to highlight the specific data relevant to the problem at hand. Data can be expressed in many different ways, and each level of reporting more readily exposes a different subset of potential problems. By utilising the extensive navigation controls in Report View, users can manipulate reports with the click of a button to more narrowly or widely display trace information and statistics.

Report View also introduces a wide range of advanced features, including:

- Three types of reports spanning multiple analysers to facilitate even the most complex test setups
- Powerful and flexible filtering tools to accelerate trouble shooting by expanding or collapsing data to give users direct access to the information they need to resolve a particular event or issue
- Report Comparison to identify changes in network performance or behavior by comparing reports to baseline expectations
- The ability to compare only counters of interest to simplify problem identification and resolution
- Threshold comparisons to automatically flag irregular behavior
- Cross-comparison of performance between protocols to identify propagated error sources, such as congestion at the Ethernet layers resulting in delays on Fibre Channel port in FCoE fabrics
- Automatic comparison functionality, eliminating the need to manually compare hundreds to thousands of counters in reports by hand

## Summary

Viavi understands the complexity of developing reliable network devices especially for emerging protocols such as FCoE and has leveraged its extensive in-field expertise to provide the most comprehensive suite of analysis tools available. With Report View, Viavi brings unparalleled analysis, filtering, and comparison capabilities to developers at the touch of a button. With the ability to automatically generate detailed performance metrics, compile revealing system overviews, measure network health and quickly identify and resolve network impairments, Report View and the other components of the Xgig Monitoring and Analysis platform give developers extended visibility into network behavior unmatched by any other network analysis tools.

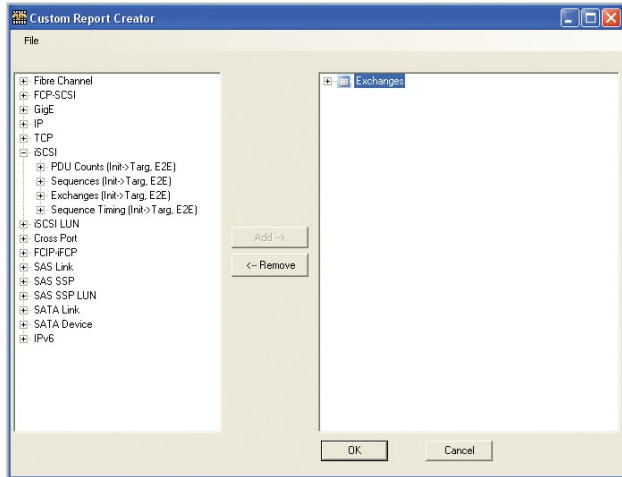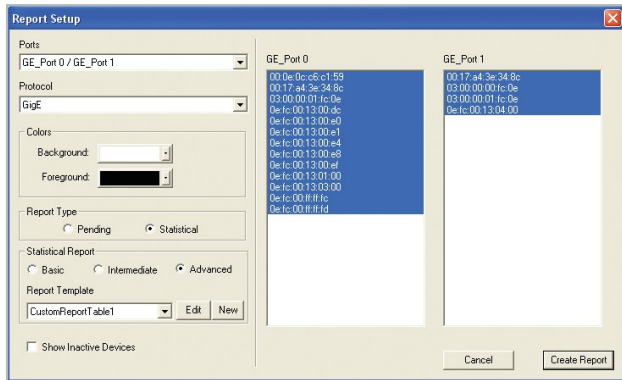View for creating a custom report template

View for creating a Report



Figure 2: Report View was designed with ease of use in mind, enabling developers
to quickly analyse large trace file through tables selected from the navigation bar on the left