High Speed Search Acceleration Using Alveo™

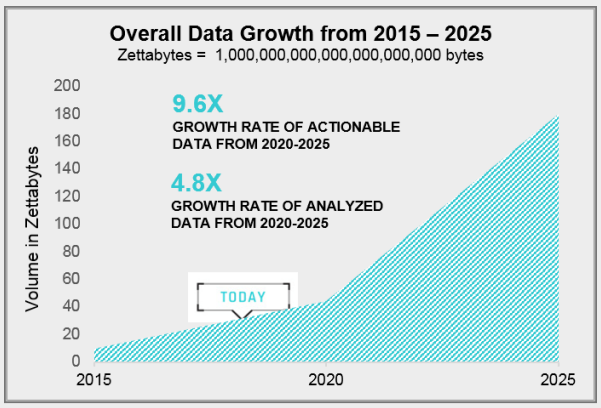
Xilinx® Alveo™ Data Center accelerator cards and BlackLynx software combine to supercharge search capabilities to render Big Data relevant Now

- Accelerate time to extract insights from data through near real-time search performance
- Add complex queries including fuzzy search, PCAP analysis, and RegEx capabilities
- Eliminate ETL/indexing for fast, varied data (XML, JSON, CSV, Unstructured, PCAP)

BLACKLYNX

INTRODUCTION

Legacy architectures render big data useless;
Pervasive data preparation, sequential processing, and other analytics infrastructure bottlenecks exist because legacy systems were never architected to deliver instant, accurate insights.



SOURCE: The Internet of Things: Getting Ready to Embrace its Impact on the Digital Economy (IDC #DR2016_GS4_VT)

Threat:
Organizations are reliant upon legacy network and compute architectures that were never designed to organize, store, and process data at the rate required today. Analytics challenges are forcing new thinking in network, storage, and computing.

Opportunity
There is enormous growth potential for organizations capable of making faster, smarter decisions from data in any analytics ecosystem and regardless of data type, format or structure..

SOLUTION OVERVIEW

BlackLynx technology combines high performance computing (accelerated CPUs and FPGAs) with standard interfaces and protocols to achieve high performance analytics.

Key benefits of BlackLynx technology

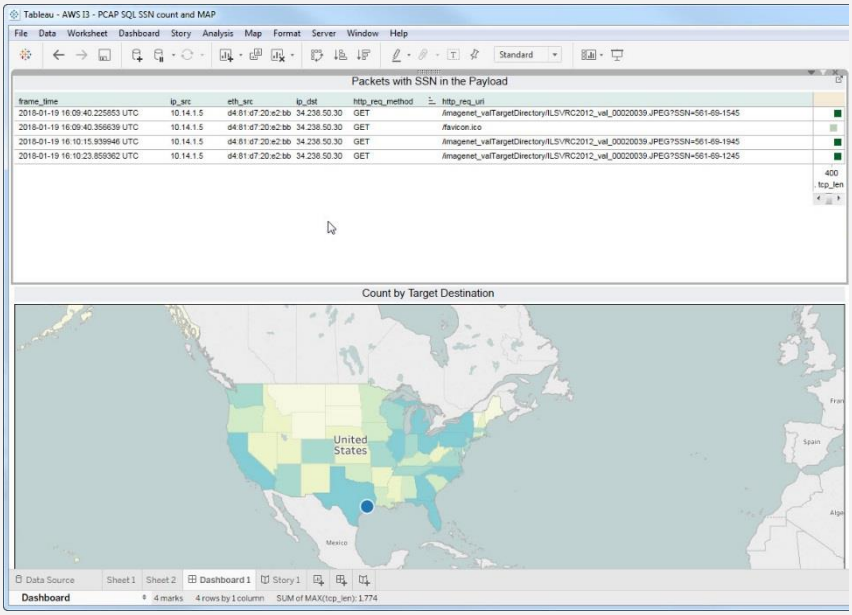
Accelerate time to extract insights from data through near real-time search performance
Eliminate ETL/indexing for fast, varied data (XML, JSON, CSV, Unstructured, PCAP) providing real-time analytics performance. Accelerate various search operations through the use of parallel architectures using CPU and FPGA compute technology.

Accelerate integration efforts through an array of simple to use interfaces
Provide simple-to-use interfaces including programmatic interfaces (C, C++, Python, JAVA, etc.), command line, ODBC/JDBC, and RESTful Interfaces, enabling acceleration of existing applications and making CPU or FPGA compute transparent to the developer/user.

Purpose-built heterogeneous compute
Ensure the right compute architecture—CPU and/or FPGA—is used to achieve maximum performance for the desired analytics function.

Accelerated search library
An array of search capabilities is accelerated through the use of BlackLynx technology, including complex queries such as fuzzy search, PCAP analysis, and regular expression capabilities. Supports XML, JSON, CSV, unstructured and PCAP file formats.

Integration with Tableau



Seamlessly integrate with current analytics environments via a series of APIs and connectors, including programmatic interfaces, command line, RESTful JSON, ODBC/JDBC, etc.

Configure Tableau to use its ODBC connection to connect to the BlackLynx technology deployed on a commodity server (Just like it connects to mysql for example). Resulting in a high performance analytics and visualization solution.

Accelerate time to extract insights from data by avoiding the need to do data extract, transform, load (ETL) and indexing.

Provide BlackLynx search capabilities (fuzzy searching, regular expressions, PCAP analysis) inside the Tableau application through simple SQL commands.

Do the same with Splunk, Microsoft Excel, ElasticSearch, and other applications that use ODBC/JDBC, or RESTful connectors.

Expand your search capabilities
BlackLynx and Xilinx technology work together to supercharge the speed and capabilities of analytics including PCAP/network forensic analysis, PCRE2 Regular Expression, and fuzzy Hamming and Levenshtein (Edit Distance) search on both structured and unstructured data.

CONCLUSION

Easily access accelerated compute resources for fast, actionable insight with no specialized knowledge required using interfaces your data applications already have.

TAKE THE NEXT STEP

Please visit www.blacklynx.tech and www.xilinx.com/alveo for complete details and to place an order today.

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