

Myricom DBL™

Financial Trading Software

Overview

DBL™ software provides unmatched communication acceleration and ultra-low latency with rapid time to deployment for industry applications in 10-Gigabit Ethernet environments. Available for both UDP and TCP applications, DBL can be utilized in two different modes: Application Programming Interface (API) mode, and Transparent Sockets Acceleration mode. Running on Myri-10G 10-Gigabit Ethernet network adapters, the DBL API mode provides the lowest latency UDP and TCP performance available in the financial trading industry. When the complementary Transparent Sockets Acceleration mode is utilized, DBL provides the highest performance for UDP multicast and TCP order execution along with very fast time to deployment.

DBL™ leverages Myricom's extensive experience with kernel-bypass software techniques which allow user-level applications to communicate directly with network adapters. These techniques eliminate overhead and latency traditionally incurred by interactions with the operating system.

Performance

When measuring application-to-application ½ RTT latency on Linux, DBL provides UDP and TCP latencies of less than 2.7 microseconds and 3.8 microseconds, respectively. On Microsoft Windows, UDP and TCP latencies of less than 2.7 microseconds and 4.5 microseconds are observed. DBL provides a compelling competitive advantage for reducing latency and transaction times for performance-critical applications such as high frequency trading (HFT).

For Windows operating systems, DBL 3.0 introduces a new Transparent Acceleration mode which improves performance and stability. When compared to earlier versions of DBL, the performance results show less jitter and latency improvements of 0.5 microseconds, up to 5.0 microseconds depending on the complexity of the socket operations.

In addition to ultra-low TCP latency, DBL delivers small variance of latency for predictable, repeatable performance in real-world applications. Dependable high-speed communication is critical. For example, packet delay, or even packet loss, in mission-critical trading and order environments can be devastating to the traders' bottom line.

Operating Systems

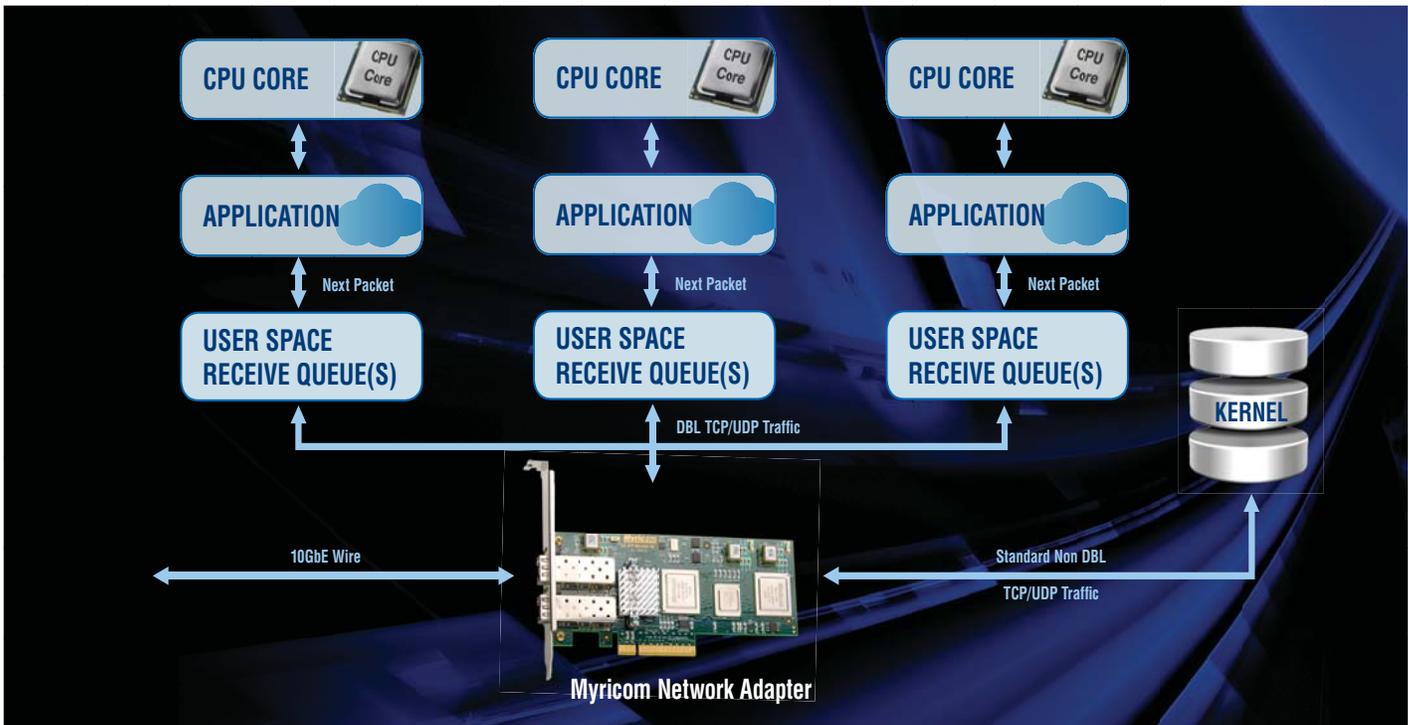
DBL™ software distributions are available for Linux and Windows. The full DBL API is accessible from C and Java on supported platforms. In addition, DBL can be used via the Java NIO Channel interface on Linux. The API mode allows existing applications to achieve dramatic latency and transaction-time improvements with only minimal changes to existing source code.

Under Linux, when transparent sockets acceleration is leveraged, TCP and UDP protocols will be selectively and transparently accelerated for data transfers that are routed through the DBL-capable Myri-10G 10-Gigabit Ethernet network adapters. With Transparent Acceleration existing BSD sockets-based applications can benefit from improved performance without requiring changes to their sources or recompilation. Additionally, the DBL API provides sockets-like functions for the UDP and TCP portion of applications which can benefit from tighter integration with the network interface.

Time Stamping Capability

DBL 3.0 supports Arista Networks DANZ time stamping which enables the Arista 7150S switch hardware to time stamp every packet. This maximizes analysis accuracy and resolution by placing the time stamp closest to the actual traffic path, removing queuing and jitter typical in multiple input analysis networks.

Myricom DBL 3.0 for Financial Training Delivers Reduced Latency for Microsoft Windows Operating System



Enhanced Features

Firms engaged in financial trading rely on network performance and the robustness of their trading algorithms. DBL and Sniffer10G are essential elements for their trading platforms. Together these deliver the low latency and lossless packet capture these firms require.

Record and Playback

Sniffer10G when used in conjunction with DBL provides the ability to record the market data and replay it to evaluate the performance and robustness of high frequency trading algorithms. Sniffer10G's lossless packet capture capability ensures that the market data feed is captured intact. The time stamping capability allows for accurate time analysis and playback which is important when refining trading algorithms and monitoring exchange performance.

Testing and verification of the algorithmic trading applications is a necessary part of High Frequency Trading. The objective is to simulate the performance of the trading algorithm against real market data to optimize performance before a revised algorithm is released into production.

Many Money Managers require that the trading algorithms be tested using historical market data from several different years. It is critical that the market feeds used in the testing are complete with no dropped packets. Only by processing all of the packets can the testing be a thorough evaluation of the algorithm. Also, the firm can increase the packet rate of the market feed to evaluate the robustness of the algorithm and the infrastructure.

Network Monitoring/Data Analysis

Access to data is critical for financial trading. The firm requires access to captured market traffic for a number of reasons including: algorithm optimization, latency monitoring, and to refine the network infrastructure. The availability of accurate market data is critical to the firm's operation.

Sniffer10G's lossless packet capture capability ensures the captured market feed is accurate. Also, to facilitate reporting, Sniffer10G's flexible architecture is designed to easily integrate into a firm's existing report system infrastructure.

For additional information, please visit www.myricom.com