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THAT'S WHY I/O IS STRATEGIC™

Top 5 Reasons
Why Emulex NX 10GbE Adapters Are Strategic

Did you know selecting the right 10Gb Ethernet (10GbE) adapter can help increase overall performance of your applications?

With Emulex OneConnect® Network Xceleration™ (NX) solutions (OCe12000-D adapter family and FastStack™ acceleration software), IT administrators can not only improve application performance, but also network analytics and asset utilization. That may be a tall order, but the NX solutions are designed to deliver. FastStack software's kernel bypass operations significantly lower latency, provide lossless packet capture and deliver superior traffic shaping capabilities. These capabilities are critical and have a financial impact in high frequency trading (HFT), network analytics (security, HFT algorithm optimization and network performance optimization) and video content delivery applications. Given the financial impact of I/O connectivity in your network, it is clear why the purchase decision for 10GbE adapters is strategic.

1

Lower Latency

High Performance Networks (HPNs) rely on low latency server-to-network connectivity solutions to optimize overall application performance. In certain environments, such as HFT, latency can have a profound effect. The old adage, "time is money," is best applied to HFT environments. Brokerage houses and financial institutions engaged in HFT depend on their network to optimize financial performance. It is for this reason that ultra-low latency solutions are deployed. The lower the latency, the faster the brokerage firm can execute trades. Therefore, in HFT environments, there is a direct correlation between latency performance and financial performance, and that is why ultra-low latency server-to-fabric connectivity is critical.

Emulex's OneConnect NX solutions, leveraging the OCe12000-D family of adapters and FastStack DBL software, powered by Myricom, deliver ultra-low latency performance over a standard 10GbE network infrastructure. This enables faster trade executions, which translates into greater financial performance.

That's why I/O latency is strategic.

2

Better Analytics

Good decisions are based on good analytics, and good analytics are based on a comprehensive collection of data. Whether trading stocks and commodities, securing corporate intellectual property, protecting against cyber attacks or simply optimizing network infrastructure, you need to start with a good set of data. The increasing volume of data traffic does not make these tasks easy. Furthermore, collecting the data without impacting network performance presents another challenge.

Emulex's OneConnect NX solutions provide line rate, 100 percent lossless packet capture and packet injection capability over a standard 10GbE network infrastructure. This enables a more thorough collection of data without impacting latency. The data captured enables superior analytics for financial trading, cyber security, IP protection and network performance optimization tasks.

That's why I/O analytics are strategic.

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3

Predictable Performance

While latency is a key metric for network performance, it should not be the only metric. Speed without predictability decreases network performance. The end result of being fast, but unpredictable, is the same as being slow. Therefore, the key is not only to be fast but also deliver predictable performance. This is critical in HFT environments where the analytics of the trade algorithms and the performance network adapter have a direct impact on the financial outcome of the trades.

Emulex's OneConnect NX solutions provide superior latency performance and line rate, 100 percent lossless packet capture over a standard 10GbE network infrastructure.

That's why predictable I/O performance is strategic.

4

Mainstream Technology

IT professionals are tasked with doing more things, faster, but within existing IT budgets. Prior to mainstream availability of 10GbE networks, many boutique network technologies, such as InfiniBand, were developed to fill the performance gap. These boutique technologies were neither cheap to deploy or manage. Fast forward to today with the general availability of 10GbE networking technology. IT professionals now see that they have an alternative to such boutique networking technologies. 10GbE networks are relatively inexpensive compared to InfiniBand, yet deliver at performance levels that address the needs of applications which have ultra-low latency requirements.

Emulex's OneConnect NX solutions deliver low latency, line rate, 100 percent lossless packet capture/injection and packet shaping capabilities over a market proven 10GbE networking infrastructure, making NX solutions cost effective to deploy and easy to manage.

That's why a 10GbE I/O infrastructure is strategic.

5

Superior Quality of Experience

Streaming video is gaining more popularity, not just in traditional home environments, but also on mobile devices. To address the broad viewing options, providers maintain video content in different formats based on the connection speed of the end device requesting the content. The key requirement for video content providers is asset utilization—how to effectively use not only the server assets, but also the networking assets. In short, how to support more streams per server.

Emulex's OCe12000-D family of adapters, combined with FastStack™ VideoPump™ software, delivers a solution enabling greater video streaming capacity for content delivery providers over industry-standard 10GbE. FastStack kernel bypass implementation enables line-rate streaming with extremely low CPU overhead. With FastStack VideoPump, content providers can drive up to 80 Gb/s, equivalent to 8,000 high definition (HD) video streams, on a single server configured with multiple OCe12000-D network adapters. FastStack VideoPump's traffic shaping capability enables superior quality of experience (QoE), addressing flicker, dropped frames and pixilation which negatively impact QoE.

FastStack VideoPump enables better utilization of existing server assets through traffic shaping capability and superior offloading features. Combined, they decrease capital expenditures and operating expenditures while increasing user QoE.

That's why I/O is strategic.

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