



How Network Delay Can Cost Your Company Millions

Understanding Network Delay Is Critical for Financial Applications

Financial institutions are heavily dependent upon business applications. As such, these applications are critical and require a rock-solid network infrastructure. Understanding how network delay affects these applications is a critical first step. Financial applications are often tested in a pristine lab environment. This type of application testing is meaningless without using real-world network scenarios.

Here are some fundamental solutions to consider in the validation of financial applications:

- How does the movement of application traffic within your data center network infrastructure affect the financial application?
- How does normal network delay affect the application?
- Does the financial trading desk require latency equalization?

Many organizations overlook the importance of emulating realistic and worst-case network scenarios in the lab and in production environments. Failure to test variables such as application performance, effect of delay, and fail-over protection can have serious real-world implications.

Without insight into the performance of new hardware, protocols, and applications, the risk of deployment problems increases dramatically. Organizations need a way to reproduce realistic network conditions and especially delay to avoid problems that impact trading profitability.

Eradicating Delay Complications

Financial application architects complain about the pressure to reduce costs and ensure business continuity with 100% uptime and predictable application performance. The move to the cloud is also adding complexity to already intricate systems. While some operational issues are unavoidable, businesses are increasingly frustrated with the high number of problems that could have been prevented. Network architecture and operations teams are tasked with the eradication of issues caused from delay and latency.

Based on guidance from cloud vendors, many financial application architects believe that simply moving all, or part, of the operation to the cloud will fix their problems. Unfortunately, data center teams do not always understand the complications and unintended consequences those changes will cause. Many avoid testing their changes under worst-case scenarios, which leads to poor performance and stability. The result is that many blind spots are created in the migration to the cloud. Insufficient testing wastes time and money.

So, what impact will these costs and delays have on the business? Complete testing is often overlooked, and the total impact is not known until the system enters the production stage. The full impact of this problem is often hidden and hard to quantify, but often has a mammoth impact. New financial application architectures introduce the potential for significant problems. Traditional test approaches are insufficient and negative testing that introduces delay and impairment is required. In addition, we find that datacenter staff normally ignore the impact of delay on the cloud and additional impairments on the product quality.

Imagine if you could approach this problem in a new way. Cloud and datacenter migrations always add delay and impairments to the communication paths where there was none or very little before. Think about the positive impact to the team and business if they could add delay and impairments test cases to the test scenario prior to production. This negative testing would optimize the application rollout and free your team for productive work.

Proactively Eliminate Network Delay Evils

Keysight's network emulation family of solutions include products that will fulfill the delay and impairment needs using speeds ranging from 1GE all the way to 100GE. The goal of this type of testing is to eradicate issues caused by delay and latency. Keysight's family of network emulation solutions provide features to:

- Test delay impacts – test the impact that delay will have on the financial application
- Perform application validation – ensure changes to the datacenter and remote applications do not undermine the financial application quality
- Conduct latency equalization – use Keysight products to equalize delay between trading desks.
- Test with real world conditions – create realistic tests to find problems before deployment.

Reach out to Keysight and they can show you how to optimize your financial application and trading infrastructure.

Learn more at: www.getnetworkvisibility.com

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