What's wrong with our network?

Poor application performance affects company performance.
Finding and fixing issues rapidly is therefore critical to business success.

Application performance issues are a frustration most enterprises will likely suffer – 89% of business executives say that poor application performance negatively impacts their business on a regular basis, according to the Riverbed Application Performance Survey.

Slow or poorly performing applications inhibit employees from working efficiently, and can have a huge impact on business productivity: according to IDC research, the cost of a mission-critical application failure for Fortune 1000 companies ranges from $500,000 to over $1 million per hour. As a result, performance issues are something no business can afford to ignore.

Despite the use of ever more robust and performant enterprise software and hardware, ensuring that there is a smooth flow of network traffic and optimal application performance shows no sign of getting easier.

Network Teamwork

When a performance issue has been identified, employees will often report that 'the network is slow'. This is a legacy from days when the network was more often than not the reason for poor application performance, even though today it is just as likely that the root cause is the application itself, or a data centre, device or some other IT element.

After being reported, the task of fixing it will invariably fall to the business's network team because – even if the culprit turns out not to be the network – all data exchanges which correspond to slow transactions go through the network.

The network team is therefore in a prime position to have the best overview.
But before the network team can start to remedy the situation, they need to identify what the problem is and where it is caused. In VIAVI's 11th Annual State of the Network Study, 52% of respondents said that their top performance monitoring challenge was determining whether problems are caused by the network, application or system.

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Finding the culprit

How network teams approach this challenge will depend heavily on company culture and the nature of the issue. But generally they will need to take a big picture view of the system, looking to find whether faults appear in one or several applications, users, sites and servers. They will then make precise measurements where problems are occurring, including collecting data on network latency, link load, packet loss, individual network devices and perhaps many more indicators.

Though this should provide the team with enough information to determine which of the network, system or application is to blame for any performance issue, it is a time-consuming and complicated process. This is why many network teams have started to turn to smart and efficient network performance monitoring and emulation tools to pinpoint the problem and source.

These tools allow network teams to analyse their networks in granular detail, helping them to detect bottlenecks and possible failures at an early stage, and then troubleshoot them before they cause any downtime. As the question of 'What's wrong with our network?' continues to be asked and networks grow in both size and complexity, network performance monitoring and emulation tools will become an essential part of any network team's toolbox.

About Calnex

Founded in 2006, Calnex is the world-leader in test and measurement solutions for synchronization and wide-area network emulation. Headquartered in Linlithgow, Scotland, with sites around the globe, Calnex was named the 2015 winner of the Queen's Award for Enterprise for International Trade, the UK's highest accolade for business success. Calnex's SNE Network Emulator is a multi-port, multi-user test solution. It emulates WAN links, and simulates complex data center and telecom infrastructure. The SNE provides comprehensive testing with higher ports counts to allow users to test with real-world network conditions in the lab, enabling issues to be found and resolved in existing networks, and potential issues in new networks to be fixed prior to the network, service or equipment going live.

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