

Why Every Organization Needs a Monitoring and Recording Fabric



Today's modern high-speed networks are carrying more traffic, at greater speeds, than ever before. The rapid adoption of centralized 'cloud' application deployment architectures, coupled with an explosion in video and VoIP traffic, are placing new challenges on the network itself and the tools deployed by organizations to monitor and protect it.

The shift to 10Gb/s networking, and the need to protect sensitive customer data and provide end users with the experience and tools that they demand are placing significant challenges on IT teams, network operation teams, and system vendors.

Conventional wisdom dictates that organizations simply buy more monitoring and security systems and deploy them more aggressively across the network, but that strategy is coming undone on a number of different fronts:

- Data centers are full and the resources required to deploy more systems simply don't exist in many cases
- The current generation of 'point solutions' are failing to meet the performance demands of 10Gb/s networking and, in the process, are exposing organizations to significant risk because they are only capable of traffic 'sampling' rather than full packet capture
- Creating network monitoring and analysis capability that can scale to 10Gb/s and beyond is not possible using standard NIC-card-based solutions, which are what is

commonly being offered today. Enabling reliable packet capture at high speeds requires dedicated, specialized hardware

- Limited integration between different systems is frustrating organizations' ability to collapse workflows and improve mean-time-to-resolution (MTTR)
- The legal and brand risks associated with security and compliance failures are now so serious that organizations can no longer afford to ignore system shortcomings.

The market is, in effect, at a classic inflection point. Currently available solutions are unable to meet the needs of organizations, which, as a result, are looking for new, long-term strategies to address what's rapidly becoming a very serious issue.

The key to understanding and resolving this problem is to take a closer look at the single-function, vertically integrated hardware and software systems that organizations are currently being invited to deploy. The one feature that is common to all of them is their need to capture packets from the network so they can parse and process them. As a result, data centers are full of appliances all capturing network traffic, but all doing it differently, and none of them capable of capturing 100% of traffic at high rates.

By stepping back and taking another look at the problem, it's possible to see a different, more efficient and elegant



approach to the problem. With a highly optimized system that's purpose built for packet capture, it's possible to capture every single packet and make it simultaneously available to any number of different applications requiring a clean and highly accurate stream of network traffic to process and analyze.

Taking an open-architecture approach, as Endace has done, it's also possible to make those systems capable of running multiple network monitoring and analysis applications, in addition to performing the packet capture function. This dramatically reduces the hardware footprint required to provide all the network monitoring and analysis functionality that organizations require.

By adopting a purpose-built packet capture platform, organizations can be confident that their hardware investment will continue to scale and provide the levels of performance and accuracy that are now a mandatory requirement for organizations across all industries. It also means organizations can choose best-of-breed network monitoring applications tailored to their needs, rather than being forced to deploy numerous, expensive, single-function point solutions.

By adopting a solution that supports high-speed write-to-disk capability and highly effective central management ability, organizations can deploy packet capture across their entire networks — from the access network, to the core backbone, and right into the data center. Deploying a comprehensive monitoring and recording 'fabric' provides organizations with a copy of every packet traversing their network, ensuring they have a highly accurate picture of exactly what's going on.

Using their chosen selection of best-of-breed network analysis and monitoring applications, organizations can then track everything from attempted data thefts and distributed denial-of-service attack (DDoS) attacks right through to network latency, quality of service (QoS), and quality of experience (QoE). With a full copy of all their network traffic at their fingertips, network operations staff can use network analysis and forensics applications to monitor and investigate issues, thereby dramatically improving the speed and accuracy with which they resolve network issues.

Welcome to Endace monitoring and recording Fabrics

Endace supplies high-performance monitoring and recording systems that are open, flexible, and designed specifically to

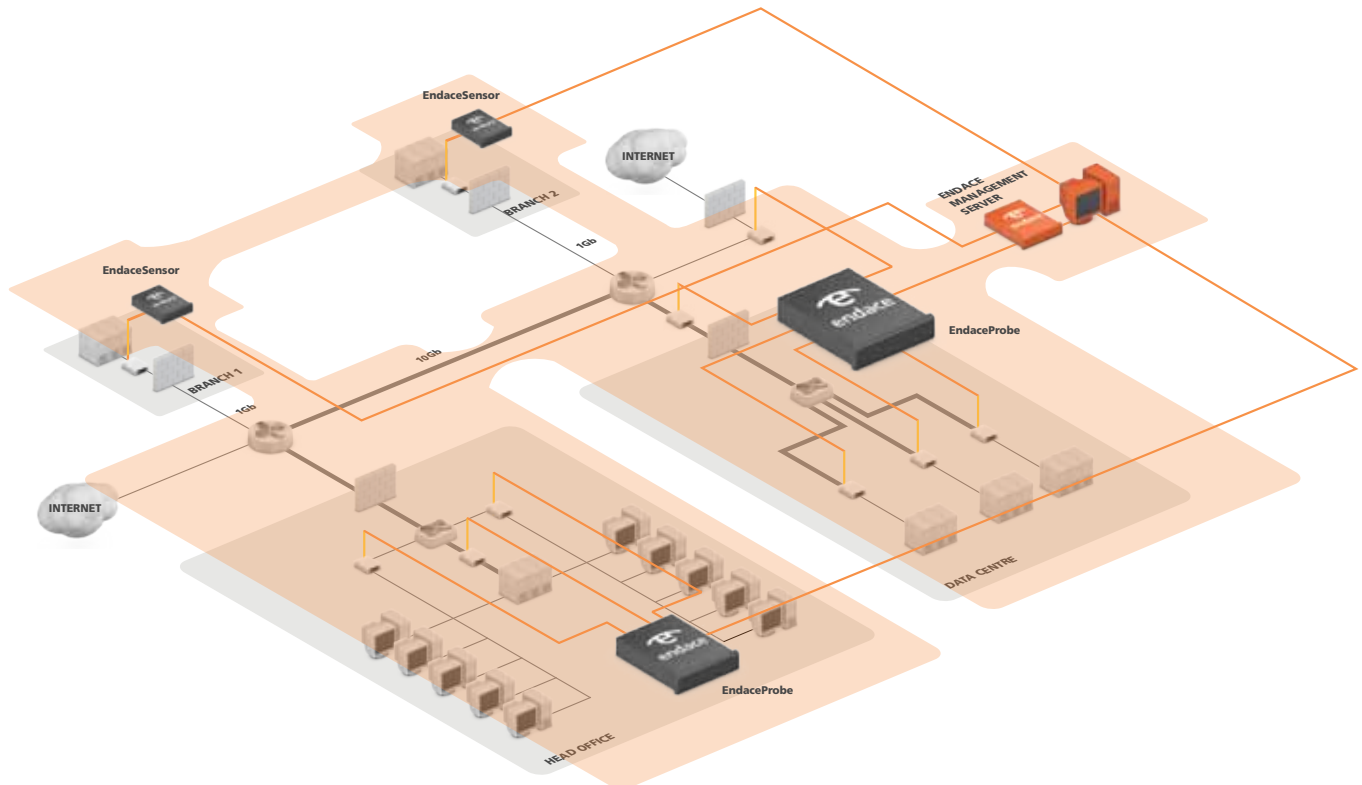
enable organizations to deploy comprehensive monitoring fabrics across their entire network. Endace Systems support:

- 100% accurate continuous packet capture at speeds from 10/100/1000Mb/s to 40Gb/s
- Ultra high-resolution timestamping (to 70ns) on every packet plus the ability to synchronize timestamps globally across an entire fabric of Endace Systems
- Up to 32TB of local traffic storage, allowing applications both real-time and retrospective access to captured packets
- Centralized management for both hardware and applications
- High port density, including mixed port configurations (GbE and 10GbE)
- A native set of applications that address the fundamental security and monitoring needs of every modern network, called the Endace Network Visibility modules, providing immediate 'out-of-the-box' value
- A unique, highly optimized application-hosting environment, Endace Application Dock, which enables custom or third-party applications to be deployed on Endace hardware
- A marketplace of approved third-party applications and a process to approve new ones.

Benefits of deploying a monitoring and recording fabric

The need to protect, monitor and rapidly resolve end-user issues is common to every network and, as networks speeds increase, is only going to grow in importance. In addition, organizations frequently have unique monitoring applications that are specific to their industry vertical (or geography) that they need to deploy, manage, and maintain. By looking holistically at the problem organizations are able to:

- Improve application performance by providing applications with a clean, filtered feed of 100% accurate traffic
- Reduce the amount of hardware they need to deploy to support the growing burden of monitoring and security
- Be confident in the knowledge that their packet capture infrastructure is capable of scaling with growth in the network traffic speeds and loads



- Deploy their chosen selection of best-of-breed applications to suit their individual needs, and make software-only deployments that leverage their existing hardware investment without incurring additional cost
- Improve MTTR on network issues by using tools and applications that reside on a common platform, that share access to a single authoritative source of network data, and that can be tightly integrated to provide improved accuracy and more efficient MTTR for network issues
- Improve the performance of their operational network by removing monitoring load. Because the Endace monitoring and recording abilities are hardware based and network access utilizes passive taps, there is near-zero load on network and resources and on the CPU performance of monitoring systems from the packet capture process.

In the current economic climate, the need to make sound strategic investments that protect the short-, mid-, and long-term needs of the business are essential.

It's clear that the current 'point-solution' paradigm isn't meeting the challenges of the 10Gb/s networking world and an alternative is required. Now is the time for monitoring and recording fabrics.

For more information on Endace products visit: endace.com
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