

ExtraHop Leaps Network/Application Gap

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Event

ExtraHop Networks launched their solution, the ExtraHop Application Delivery Assurance System, on December 9, 2008. ExtraHop is a new entrant to the network management technology community, but brings deep roots and knowledge via its two founders, Jesse Rothstein and Raja Mukerji, who cut their teeth on advanced, application-aware networking as architects at F5 Networks. ExtraHop has focused their solution on embracing one of the most difficult and critical issues facing today's IT operations teams – bridging the gap between application and network viewpoints, and shining a light of clarity that exposes the complex interdependencies between the two domains. The ExtraHop solution consists of an appliance that connects to the network via SPAN or tap, with data collection, analysis and presentation software all resident on the appliance.

Context

Application delivery infrastructures are becoming more advanced and sophisticated every day. This is good news in many ways, in that it is getting easier to roll out new applications and (for the most part) easier for customers and end users to access them. Unfortunately, some of the technologies that make this possible, such as Web2.0, SOA, and Virtualization create a fog of abstraction, making it very difficult for operations teams to understand what part of the multi-element, multi-tiered, interdependent delivery infrastructure is to blame when things aren't working. This is especially true when the problem is performance degradations, rather than outright failures. The answer is a non-trivial challenge – to effectively assemble monitoring and management views that connect the dots between applications, services, and the networks that deliver them. Several existing management tools vendors have come at this from various angles – network packets, flow records, application instrumentation, agents, even top-down BSM. And while many are coming close to assembling the sort of complete and actionable presentations that bridge the gap, none have done this with a single integrated solution in the way that ExtraHop has now brought to bear.

Packet-level analysis is an essential viewpoint and can provide unique values. Only by understanding the structure of traffic – not just the volumes and destinations, but also the underlying interactions between the applications and the networks that they transit – can the more subtle, insidious, and truly dangerous degradation and interoperability issues be revealed. There are two major camps of solutions out there today – one is network-based, the other is focused on the application layer. Network-based tools provide the essential insights into the touch point between applications and networks, as well as the systemic context to understand interactions between applications and services that

cannot be assessed when collecting data from endpoints. Application-layer solutions are typically based on instrumentation that is placed on or near application servers and is often extremely detailed in terms of providing views into the connection between application design/components and the transactions, communications and performance of each. What is missing in the market are solutions that bridge the gap between these observation points – structural application details presented in full context of the network that is delivering them.

Another major challenge is scalability. When assuming a network-based monitoring viewpoint, it is essential that tools be able to keep up with gigabit transmission rates without missing a bit or byte. ExtraHop has addressed this by means of an innovative application of the approaches taken for application-layer switching – a combination of deep packet inspection and on-board analysis. The result is an ability to easily scale to very high capacity network links, and a good position for future ability to accommodate growth in this area.

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ExtraHop is also delivering on two other big themes which EMA promotes – ease of deployment and automation. The ExtraHop Application Delivery Assurance System requires virtually no configuration in order to deploy or use, which means no training hurdles delaying return on investment. ExtraHop delivers on the automation front by tracking and monitoring time-of-day and day-of-week behavioral norms across all monitored metrics and alarming when anything is outside of expected ranges. The solution also automates parts of the troubleshooting and recovery process by recommending remediation steps to operators whenever a problem is detected.

EMA Perspective

While many products are designed to address new, or different, emerging problems, ExtraHop is taking dead aim at a well known but underserved problem space. In Enterprise Management Associates' opinion, assuring quality of networked application delivery through the fog of virtualization will be one the greatest challenges of the coming decades. Bandwidth does not solve these issues – the core of the problem and the challenge is developing and leveraging an understanding of the relationships between technology elements. ExtraHop is walking right into the fog bank with their Application Delivery Assurance System, and pulling together data that illuminates the situation with a surgically-focused, integrated, and automated product approach that previously required coordinated analysis across multiple tools and multiple constituencies.

The enterprise operations market is ready for new ideas, and few existing vendors have fully tapped the value of the packet-based viewpoints gathered from the network perspective. These viewpoints provide compelling insights into the hard problems that are missed by device-oriented monitoring tools. There are many challenges facing operations professionals in today's highly distributed and virtualized environments, and they cannot afford to be without clear, application-aware visibility into the network that is delivering the applications upon which their organizations depend so vitally. While there are many solutions out there that are helping network operators to build application awareness,

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ExtraHop is taking a big leap forward in binding exceptional layer 7 analysis with real-time network monitoring, recognizing and exposing problems that are typically outside the network professional's scope of vision.

As with any new company, ExtraHop is starting out by focusing on a number of specific use cases – good ones that represent real needs and opportunity to add value – but they will need to add to this quickly to keep building value. They also need to find their place next to other operations platforms, so that they can assume optimal positions and integrations at data sharing and workflow levels. Despite these, EMA recommends that network and applications operations teams add ExtraHop to their consideration list if managing multi-tier, multi-site infrastructures is part of their responsibility, and especially if the organization is dependent on high-performing, network-delivered applications for business success.