

# OPNET's ACE in the Hole

## Abstract

OPNET Technologies (OPNET) has taken the best of its existing organically grown product suite and combined it with a key acquisition to create the new combined ACE product suite. OPNET acquired Network Physics technology assets in October 2007 and accomplished the integration of its existing product suite with those of Network Physics in a relatively short time. The result is the new Application Performance Management (APM) suite that encompasses the new ACE Live and the enhanced ACE Analyst for managing networked applications, along with OPNET's existing Panorama server-based APM tool.

## Unified Application Performance Management

OPNET has significantly enhanced the former NetSensory product, since acquiring Network Physics, and integrated it with its existing ACE Analyst, (formerly called ACE Plus). OPNET's new ACE Live is the resulting incarnation of that effort. ACE Live offers a unique set of features that provide global visibility across the enterprise network; identifies, isolates, and localizes anomalies and issues that arise; helps focus where and how individual transactional problems can be remedied.

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ACE Analyst lends in-depth, expert insights into how network's devices, links, applications, and protocols are interacting amongst one another by providing an exhaustive, cohesive set of views with deep insights into the end-to-end performance of networked applications. ACE Analyst brings its strong analytics capabilities to the forefront when combined with ACE Live. The combination of the two ACE products allows network staff to not only pinpoint and identify network application performance issues, but also remedy the source of those problems before they severely impact business critical operations. The proactive nature of the product suite elevates network staff from being in a simple reactionary mode into predicting where and how those problems could potentially pop-up before they reach a critical point.

The integration of ACE Live and ACE Analyst together offers customers multi-dimensional end-to-end application performance and usage monitoring together with the ability to troubleshoot and drill directly down into ACE Analyst from inside of ACE Live to determine the root cause of performance-based issues. From inside of ACE Live, packet trace captures can be passed along to ACE Analyst for predictive analysis

## ACE Live

ACE Live is packaged as an appliance that passively connects to an Ethernet connection, via a spanning port or tap, to monitor and collect actual network traffic flows for all types of traffic around the clock. The ACE Live appliance is typically up and running on customer networks in under an hour due to its straightforward setup and configura-

tion simplicity. With its continuous traffic flow collection, the appliance allows users to react to and eliminate application performance problems proactively to enforce expected performance and availability of an enterprise's application delivery infrastructure. Almost any combination of complex infrastructure mediums, LAN, WAN, VPN, VLAN, MPLS, or Internet, can be factored into ACE Live's auto discovery for troubleshooting, and analysis. OPNET's integrated approach to monitoring application performance and end-user experience allows it to deliver a high quality end-to-end management solution that excels beyond the simple monitoring, measurement, and diagnosis of network related problems. It can auto recognize dozens of business applications right out of the box, thus contributing to the extremely small setup and installation time required to utilize the product suite. ACE Live also detects service level violations and uncovers the true root cause of application performance problems, pinpointing the source for triage.

Users are given complete visibility into many of the complex transactional details that exist in today's application structure across the enterprise, with both detailed and historical views available on performance, utilization, route quality, service provider performance, and end-user response times. With its adaptive alerting feature, ACE Live can automatically generate and send out alerts when SLA thresholds are outside of their established bounds based on either established limits or historical factors.

ACE Live provides all of its data visibility through a single unified viewport into its extensive feature set. Data summaries are automatically provided to user-defined groupings for role-based access and presentation. From the summaries, end users can dive deeper into the heart of the problem using a variety of drill down options. To better summarize and correlate information presented, the user can establish groupings of users, devices, IP addresses, systems, etc., thus controlling the display of large sets of data.

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## **ACE Analyst**

ACE Analyst brings a complementary package of application performance management to the application life cycle using embedded expert knowledge on how applications, servers, and networks interact and coexist enabling a more comprehensive understanding of the end-to-end performance of networked applications. This greatly enhances the average network professional's ability to simply look at network traffic patterns and begin analysis.

ACE Analyst offers a powerful and intuitive analysis environment for enabling pre-deployment certification for enterprise application environments. It validates any planned changes to those application environments and accelerates the identification and subsequent troubleshooting of any application performance problems that may arise as a result. With its embedded expert knowledge of application interworkings, it's able to understand application behavior down to the transaction level, and intuitively present graphical diagrams of the interactions and dependencies as they exist among the various network components involved with the application being examined.

Application performance can be diagnosed and decoded at the transactional level through automated diagnostic reports that isolate application problems and quickly identify performance bottlenecks for fast and efficient resolution. Its decoding capabilities allow each

layer of an application to be dissected for complete diagnosis of any and all application performance related problems. Graphical views into individual application tiers, as well as dissections of application transactional communications, can be used to identify and diagnose protocol delays, error messages, retransmissions, and arrival time related issues. With its built-in knowledge of over 700 protocol and transactional decodes, ACE Analyst is capable of providing exhaustive visibility into the code-level interworkings of most common applications.

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Not only is ACE Analyst capable of working with everyday network application related problems, but it is able to create industry unique predictive models of applications on the network through the use of network trace captures. From those real-time captures, it's able to predict application response times so as to provide insight into future performance profiles around the network. This allows for *What-If* analysis of infrastructure and application blueprint parameters for better network and application performance tuning. Through its application design *Whiteboard*, ACE Analyst provides network professionals with the means to architect and edit applications for better application performance tailoring across the enterprise to better assess the impact of any *What-If* changes applied during the predictive analysis process. Modifications can be applied to the complex logic and behavior of the various layers of today's applications.

## Unified APM Solutions

Beyond the Network Physics acquisition and the integration of the ACE Live product with its existing ACE Analyst product, OPNET has provided integration on other product fronts and it has incorporated other technology connections with the key components of its product suite. When thinking of new application technologies, most organizations would identify Voice over IP (VoIP) projects as a huge challenge. OPNET's new ACE Live is up to that challenge, especially when it's paired with its existing IT Guru Network Planner. The combination of the two products allows enterprises to tackle the VoIP lifecycle from beginning to finish. VoIP predeployment planning, readiness assessment and subsequent testing can be performed, while ACE Live provides baseline network data into IT Guru's network model for traffic analysis and behavior analysis. The two products combined can also allow network staff to track and manage call quality, troubleshoot performance-related problems and compare current network loads with initial traffic forecasts.

Current application design can get extremely complex, especially in those environments where it's a never ending procession of changes and updates on a constant basis. OPNET's ACE Analyst can provide prediction and performance troubleshooting to existing application environments with its visual transaction oriented interface. Beyond simply showing performance issues, ACE Analyst also helps by modeling complex application-layer logic and behavior to include end-user interaction and assesses revision impacts when changes are applied.

WAN Optimization is a technology that most enterprises are deploying to improve application performance over the network. ACE Analyst provides insight into predeployment planning of WAN optimization appliances so that network staff can identify the

ideal sites/locations for deployment of the equipment. It provides quantifiable predictive network throughput and response times to be formulated prior to the actual deployments. In addition, ACE Live has the ability to baseline WAN environments prior to WAN Optimization deployments and then allows those environments to be monitored once they are in full production mode. When problems do occur, The integrated ACE product suite can alert on SLA violations, identify performance bottlenecks in the WAN segments, and validate the WAN areas that may require future upgrades and modifications.

## EMA Perspective

In the opinion of ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) analysts, OPNET has scored a hit with both the strategic acquisition of Network Physics and its associated assets along with the transformation and subsequent integration of those assets, in particular the NetSensory product, with its existing product line. Many product acquisitions tend to see the former product conveniently absorbed into a company's product line, never to appear again. Or at the very least, it doesn't surface for a considerable time and certainly isn't recognizable afterwards.

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OPNET has not only absorbed the NetSensory product, but it has elevated the new product incarnation to a front runner within its broader solution set. No second class product, the new ACE Live is a cornerstone in rounding up all the necessary transactional network data that it and many other existing OPNET products might require for their full and complete operation in any customer network.

There are a few cosmetic tweaks that still need to be addressed in the visual delivery of the new ACE Live, but otherwise it should be a straightforward matter of laying out a long-term roadmap of additional enhancements and tighter integration with all of OPNET's other APM components. If OPNET can accomplish those things in the next 6 – 18 months, they may very well force the industry as a whole to stand up and take notice.