Pipeline

Knowledge Is Power

Monitoring For Assurance in a Shaky Economy

By Tim Young, Editor-in-Chief

There are dozens upon dozens of cutting-edge, sexy buzzwords floating around the communications industry these days. "Network Monitoring"? That's not really one of them. However, it's at the heart of so many promises of improved service and increased visibility. The ability to monitor networks and inspect the packets flowing across them is the key to improved service assurance, security, and, by extension, higher levels of customer satisfaction, maximization of existing infrastructure, rescuing of stranded bandwidth, and overall proactivity with regards to network health and customer care.

The question of monitoring, however, is complicated by the fact that networks are changing. "In the classic SS7 environment, a network monitoring and troubleshooting tool enabled service providers to react quickly to alarms in the network operations center (NOC), or to customer complaints," said Todd Biddle, General Manager for Agilent Networks' Assurance Division. "They would examine trace information, find the problem and fix it." That's an important step, and one that is essential for maintaining a healthy network. However, as Biddle pointed out, it isn't perfect. "It represents a purely reactive approach to network management, and this approach is only part of the solution required in today's market."

What's Wrong Here?

And, ultimately, there are a number of things that many service providers *aren't* doing when it comes to network monitoring. "Most CSPs still do not have the whole picture," said Cam Cullen, Director of

Product Management, Americas for Allot Communications, a vendor dedicated to network monitoring and deep packet inspection. "They are relying on home grown or antiquated tools that do not give them anywhere near as accurate a picture as some of their competitors have." This means, of course, that there are a great number of opportunities that these SPs are missing out on due to that lack of visibility. "There is so much useful information out there just waiting to be collected," Cullen continued, "Information that can be readily turned into revenue and increase QoE for subscribers at the same time."

Cullen is not alone in accusing vendors of a sort of myopia. "CSPs often find their technical sweet spot and subsequently develop "service tunnel vision," focusing their service offering on a particular brand or domain of communications technology," said Paul Wiggins, Product Manager for Tone Software Corporation, which offers network monitoring and management solutions. "In today's world, there is no cookie cutter approach—each business has unique communications needs and network challenges." In order to become more competitive and, ultimately, more profitable, service providers must be able to deliver a range of service offerings that is both broad and deep. "CSPs must have the flexibility," Wiggins continued, "to deliver service offerings that will manage a wide range of clients' communications applications, configurations and gear—including legacy TDM devices that have yet to be transitioned to the IP network."

Thierry Jacq, Product Manager for French monitoring and QoS leader Astellia, sees a particular lack of understanding of the importance of monitoring in the mobile world. "Some mobile operators sometimes do not understand the importance of monitoring solutions, which measure the QoE per cell and give them a 360° view of their networks," said Jacq, pointing out that many mobile operators are satisfied relying on OMC counters alone. In addition, Jacq asserts that many mobile operators "underestimate the importance of Radio Access Network (RAN) vs core in the global question of quality", and sometimes "add network elements instead of optimizing the existing networks with QoS/performance monitoring and optimization systems." These components all combine to form a network that lacks the sort of optimization that would make it faster, better, and smarter.

The Perils of Complexity

And a faster, better, smarter network is just what the doctor ordered as we move into an era of increased complexity. "[IP Networks] are more complex," said Trevor Hayes, an analyst with LTC International and Contributing Editor for Pipeline, "but the tools we have to manage them are a

whole lot more sophisticated than they used to be. They don't require nearly as much installation of equipment in the network. There are packets going in and out all the time, but you can identify and prioritize them much more readily than you could before."

Cullen concurs.   "More and more we are seeing network convergence drive the need to have the same system/platform across multiple topologies – often fixed and mobile together with a single reporting tool to give analysis across both topologies." So there's certainly more to keep an eye on, but that "more" isn't spread out across numerous areas. It's localized. "So it's becoming more complex, Cullen said, "but not necessarily harder."

However, though IP reduces the overall difficulty of monitoring, we can't forget that we're not all-IP, all the time just yet. "One of most prevalent contributors to complexity in IT today *is* the convergence process," said Wiggins. "Moving from older technologies to newer ones takes time, and during the process there is a mixture of equipment, applications and support processes that must also change." Wiggins goes on to quote a Gartner study that found that "85 percent of networks are not ready for VoIP and 75 percent of VoIP deployments fail if a pre-network assessment and network optimization is not performed prior to loading IP voice traffic on the existing corporate network."

Therefore, oftentimes these new technologies are utilized with the intent to make communications simpler and less expensive, but end up on networks that are ill-equipped to handle their complexity. "In fact," Wiggins said, "poor voice quality is one of the most common complaints from users of IP telephony networks." And, at the end of the day, a phone that can't be relied on to deliver high-quality voice is a pretty lousy phone, no matter how new and shiny it is.

Hard Times

It bears mentioning, of course, that we aren't exactly living in an era that provides a lot of tolerance for unnecessary spending. The soft economy we presently face is impacting network monitoring just like it's impacting everything else… but it's not all bad news.

"I know it's a cliché," said Cullen, "but in every crisis there is opportunity." In this particular crisis, the opportunity may be in the hands of network monitoring plays. "Operators will be defending their turf and looking to grab customers," Cullen continued. " I have seen studies that state that people are actually spending more time on the Internet as opposed to going out and spending money."

Those customers, however, are likely less willing to tolerate substandard service for the dollars that they spend. Therefore, it's up to the QoE police—like the network monitoring providers—to make sure the experience is a pleasant as possible.

Wiggins also sees opportunity in shaky times. "Current economic pressures have had a dual impact on CSPs: First, enterprise IT organizations that have suffered budget cuts and staff reductions are increasingly looking to CSPs as an attractive option to remotely manage their converging communications networks more cost efficiently than the IT department can do so itself—particularly with less staff." That creates a sound opportunity in the enterprise space for CSPs who are so inclined. "Second, in an effort to meet the management needs of these diverse enterprise communication environments, CSPs are looking for ways to expand their services offerings to manage a wider range of communications technologies from a variety of manufacturers—while still maintaining or even improving their profit margins." Therein lies the opportunity for vendors to help those service providers to ensure that range of offerings is well-managed.

Next Stop:

Any doom and gloom projections aside, however, the current world economy will eventually recover, or at least reach a level of stability and renewed vigor. Service providers must be poised to embrace the future of technology that lies beyond. And what are some of the trends that will drive the future of network monitoring? "I think the subscriber will play a significant role in driving/shaping network monitoring," said Cullen. "If [subscribers] can see value in what they are being offered as a result [of better network intelligence], things will move a lot quicker." Cullen points to markets like Asia as examples of areas where this is already being seen. "Throughput is always an issue, the throughput is always increasing, and vendors need to be ready."

Furthermore, particular emerging technologies, particularly in the mobile market, are driving global demand and should be driving network monitoring development. Astellia's Jacq points to 4G (LTE, WiMAX), IMS, and femtocells as being some of the key drivers of future communications growth. In addition, Jacq points out the impact of increased machine-to-machine communications, which is an oft-overlooked element of the communications picture.

Wiggins sees video as being a key driver for the future of communications and monitoring. "Video is rapidly breaking into business communications networks as a strategic technology that can deliver significant business benefits," going on to cite specific examples of the business benefit of video. "However, the impact of supporting video across the corporate network is huge, and will require a next generation of network management solutions to ensure reliable and quality video delivery."

Indeed, a vast slate of offerings awaits and CSPs must be equipped with the network monitoring tools to handle these challenges, thereby turning challenges into opportunities.