

# Optimizing the Broadband Experience – in Real Time

If subscribers aren't getting the service levels they expect, can you tell them why? Xangati can.

## A BBP Staff Report

As providers introduce advanced services over their networks, customers' expectations rise accordingly. Broadband subscribers expect speedy downloads. Video subscribers expect great picture quality. Voice subscribers expect conversations without annoying pauses or echoes. And when subscribers don't get what they expect, they're quick to call tech support.

But providers' technical support reps don't always have the necessary tools to solve service problems. It's difficult to determine why a broadband connection has slowed to a crawl, for example. Has a neighbor availed herself of the subscriber's WiFi connection? Or is the subscriber's own computer running programs he isn't aware of? Typically the support rep asks a few basic questions, then escalates the problem to a network engineer – who must generally start over from square one, and who may not have an easy time diagnosing the problem, either. Even sending a truck out to the subscriber's house doesn't always produce the desired results.

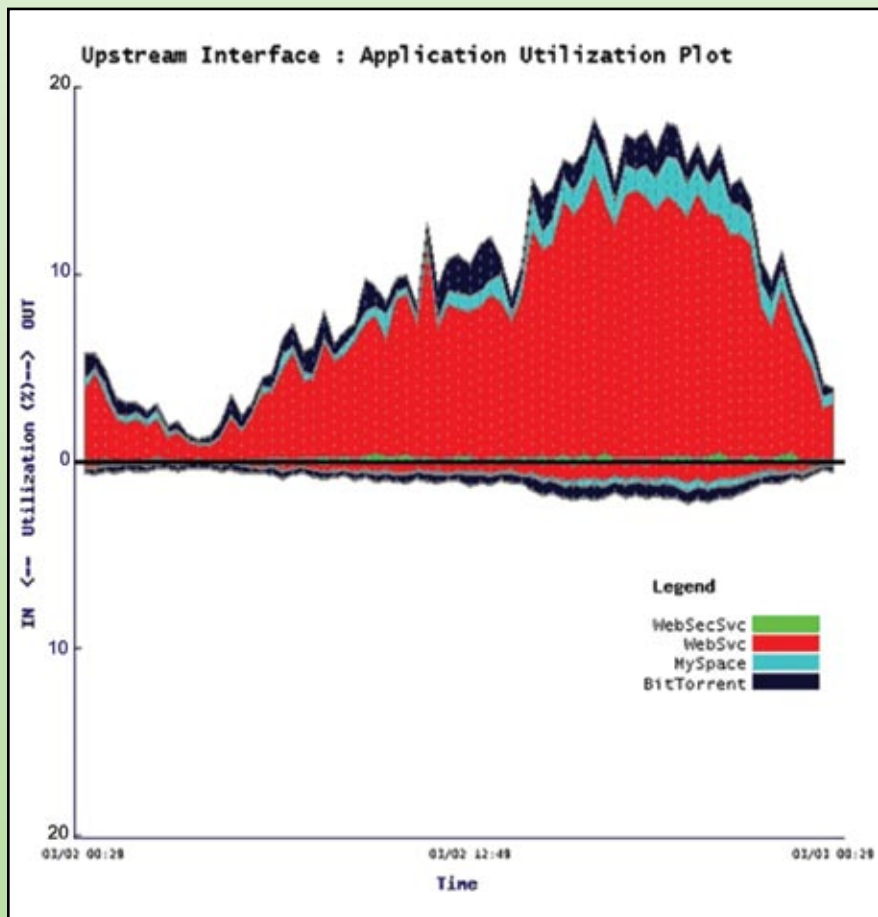
"Only the desperate and the brave call," says David Messina, marketing VP at Xangati, a startup company that hopes to make customer support encounters more satisfying for service providers and customers alike. "But you want users to end the call with something being achieved. It's not a good place for service providers to be."

### VISIBILITY AT THE SUBSCRIBER LEVEL

Xangati, a privately held company based in Cupertino, California, launched its

first product in 2007 – an appliance that sits on the service provider's network and gathers detailed information from the routers about the applications that each subscriber is using. (Though Xangati doesn't install hardware or software at the customer premises, the appliance maintains a fixed identity for each subscriber even in the absence of fixed

IP addresses.) The company originally conceived of its appliance as a troubleshooting tool for network engineers and network operations staff. It would collect baseline information to establish normal behavior for each network element, subscriber and application, and then send alerts to network operators whenever behavior fell outside of normal parameters.



This Xangati output screen shows bandwidth use by type of service.

The Xangati appliance was a success on its own terms, but the company quickly found it had overlooked an even more pressing need: a problem-solving tool for front-line customer support reps. "There was no network equivalent of Ctrl-Alt-Delete," Messina says, referring to the keystrokes that bring up Windows Task Manager, which shows status information for each process and application running on a PC. So in March of this year, Xangati introduced Virtual Task Manager, software that presents subscriber-level data in a format accessible to support staff.

Support reps using Virtual Task Manager can see in real time which applications are active and how much bandwidth they are using. They can work with subscribers on the phone to recreate or replay symptoms and investigate the subscriber's recent history in detail. If necessary, they can drill down into any related application, server or peer.

#### "THERE'S A WHAT-BOX UPSTAIRS?"

Primelink, a New York State CLEC that was one of the first companies to trial Virtual Task Manager, says senior engineers who once spent nearly all of their time on reactive escalation issues have cut that time in half. The engineers are also discovering some surprising causes for customer complaints. "In one case," says Frank Koniszewski, an IP network engineer at Primelink, "the Xangati application enabled us to track down a recurring performance problem to an Xbox gaming server the subscriber's teenage son had installed surreptitiously. Whenever the son fired up the server to play games with his friends, the home Internet connection was flooded and became extremely sluggish."

Another early user, Harris Miller, manager of engineering at EATEL (a Louisiana ILEC), says his company was

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frustrated by being unable to resolve complaints about network performance degradation. Virtual Task Manager "lets us be more helpful and take ownership of the problems," he says. EATEL began by using Virtual Task Manager reactively, but Miller says the company is now taking proactive steps as well: "We're seeing a lot of parents who aren't aware their kids are running BitTorrent and other peer-to-peer programs, and we're educating them about what they can do to secure the home connection. We're finding out people's computers are infected with viruses and they don't realize it till they can't function, so we're educating them about security. When there is a spammer, we can zoom in on them faster...and mitigate an attack before it knocks the server down."

Sometimes support reps determine that response time is slow because the user doesn't have enough bandwidth. Miller says, "There may be a legitimate need to upsell to a faster connection speed. If it's not a peer-to-peer or virus issue, they may really be saturated. So it puts us in a position to upsell while we're correcting the problem - spinning a negative to a positive."

EATEL has made an effort to protect customers' privacy, and Miller says customers don't perceive Virtual Task Manager as a privacy threat. Reps ask for permission before running tests, and they explain to customers that all they can see is the header package, not the actual sites the customer is visiting or the contents of what is being downloaded. They also explain that malware running

on the customer's computer may expose the customer to identity theft.

#### AN INFRASTRUCTURE-AGNOSTIC PRODUCT

Because Virtual Task Manager is infrastructure-agnostic, it can be used by providers with any type of access network. Xangati is marketing the product - directly and through value-added resellers - to local exchange carriers, including wholesalers; to cable providers; and even to private operators like universities. At current pricing levels (the entry price point for the base platform is about \$35,000), the company says its product is economical for providers with between 1,000 and 100,000 subscribers, taking into consideration the savings in support costs and the benefits to customer retention and loyalty. A hosted service, which the company is considering, might be suitable for even smaller providers.

Xangati also recently introduced what it calls a "24/7" program, a quick-start methodology for launching Virtual Task Manager that promises users seven major insights into their networks in 24 hours. One reseller reports that it was able to detect a spambot on the network of a customer within hours of installation.

In addition, Xangati is looking for synergies with other vendors' products. A recently announced three-way integration with Calix Management System and ClearAccess TR-069 CPE Management Application gives support reps insight not only into the network applications that a subscriber is using but into the location of the subscriber's premises and the broadband access devices on site - and then allows them to remotely control the home network and customer premises equipment so they can fix problems without sending a technician to the site. According to Miller, "The integrated workflow that the Calix-Xangati-ClearAccess solution offers would give us the most direct, cost-effective, and easy method for fixing any performance problem, whether the source is in the access network or in the subscriber home." ■

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