



HIGHLIGHTS

Goal: For PowerNet Global Communications to monitor and troubleshoot Voice over Internet Protocol (VoIP) traffic and softswitch implementations on its network.

Solution: Emprix's Hammer XMS, a carrier class VoIP monitoring solution for next-generation services

Results: A projected, cumulative five-year net benefit of \$840,634, driven by reductions in customer turn-up costs, call center costs, and network operations center costs. An ROI of 330%, and a payback period of 10 months. PowerNet Global Communications is now able to monitor and proactively troubleshoot VoIP calls, has increased customer satisfaction, and will be able to more easily launch new revenue-generating services in the future.

CUSTOMER PROFILE

PowerNet Global Communications

www.powernetglobal.com
PowerNet Global Communications is one of the fastest growing telecommunications companies in the United States.

Headquarters: Cincinnati

Industry: Telecommunications

Employees: 300+

Revenue: \$100+ million

PNG Chooses Emprix to Automate VoIP Monitoring and Improve Call Quality

PowerNet Global Communications (PNG) offers a wide range of integrated voice, data, and Internet solutions nationwide to residential and commercial customers. A key component of its growth is its ability to offer new telecommunications services, particularly those related to Voice over Internet Protocol (VoIP) traffic.

PNG sought a VoIP monitoring solution that would allow it to take a proactive approach to VoIP troubleshooting, fix problems more quickly, improve the call quality of VoIP traffic, and reduce costs. It turned to Hammer XMS, a carrier-class VoIP monitoring solution for next-generation services. As a result, it has gained a projected, cumulative five-year net benefit of \$840,634, driven by reductions in customer turn-up costs, call center costs, and network operations center costs. The solution has an ROI of 330%, and a payback period of 10 months. PNG is now able to monitor and proactively troubleshoot VoIP calls, has increased customer satisfaction, and will be able to more easily launch new revenue-generating services in the future.

Benefits

Table with 2 columns: OBJECTIVE and BENEFITS ACHIEVED. Rows include: Take a proactive approach toward VoIP troubleshooting, Reduce costs, Resolve problems more quickly, and Expand into new markets.

The Challenge: Monitor and Troubleshoot VoIP, Reduce Costs, Increase Customer Satisfaction

Cincinnati-based PowerNet Global Communications (PNG) is an integrated communications provider that offers a wide range of integrated voice, data, and Internet solutions nationwide to residential and commercial customers. It has been awarded the Inc. 500 private business award for being one of the fastest growing and leading private companies in the country.

A key component of its growth is its ability to offer new telecommunications services to both residences and businesses. At the heart of those new offerings is the company's use of IP communications, notably Voice over Internet Protocol (VoIP).

PNG handles traditional TDM as well as VoIP traffic. The company had no solution in place to monitor TDM and VoIP traffic, and no way to guarantee its VoIP call quality, or to quickly troubleshoot VoIP-related problems. PNG was looking for a solution that would do the following:

- **Maintain high quality of VoIP traffic.** With no way to monitor VoIP traffic, it was difficult for PNG to ensure the quality of VoIP calls. In order to keep customer churn to a minimum and to maintain high growth, it was important that PNG keep customers satisfied by maintaining high voice quality. PNG was looking for a monitoring solution that would allow it to measure and ensure high voice quality.
- **Take a proactive approach toward VoIP troubleshooting.** With no VoIP monitoring solution in place, the only way that PNG knew it had a problem with VoIP calls was when it received customer complaints in its call center. Instead, PNG wanted to fix any problems before they became noticeable to customers.
- **Identify problems more quickly.** Before having a VoIP monitoring solution, it could take 30 minutes for PNG to identify a VoIP-related problem. PNG wanted to significantly reduce the amount of time it took to identify and fix VoIP problems.
- **Reduce call center costs.** Because PNG had no way to proactively monitor and fix VoIP problems, the volume of trouble calls to its call center was higher than the company wanted it to be. It wanted to reduce call center costs by reducing the number of trouble calls that agents had to handle.
- **Reduce troubleshooting costs.** The lack of automated monitoring tools made it difficult for PNG to easily uncover the cause of problems. The company was looking for an automated solution that would quickly pinpoint VoIP issues, and reduce the staff time required to find and fix problems.
- **Reduce carrier and customer turn-up costs.** Whenever PNG brings a new carrier or customer onto its network, it must go through a series of interoperability tests. PNG was looking for an automated way to verify the quality of new connections.

“Hammer XMS has helped us reduce our costs, improve voice quality, and prepare our network for launching future services. We see it as a key component to our company’s success.”

Rick Kohel
 Manager for Voice Network Solutions
 PNG

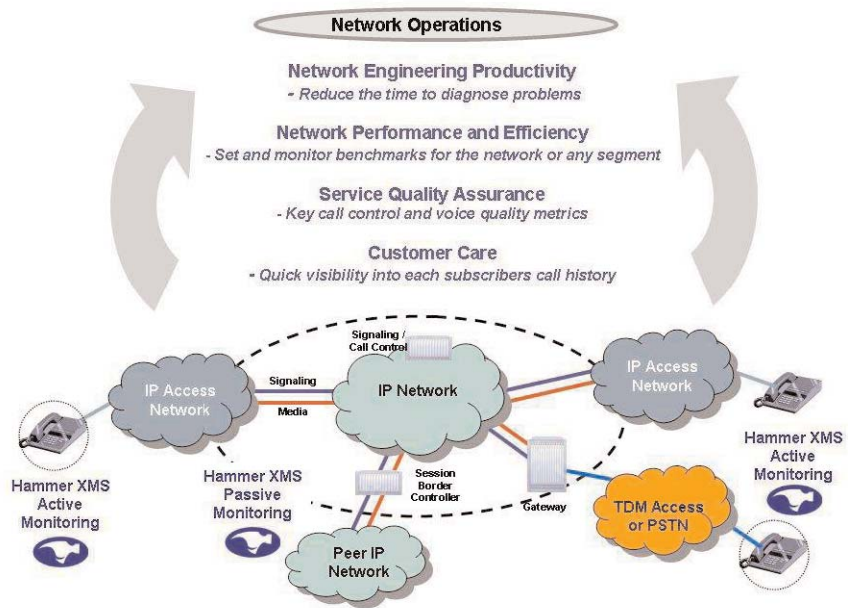
PNG Chooses Empirix’s Hammer XMS

The PNG engineering team conducted a competitive search for monitoring solutions, considered solutions from several companies, requested references from each, and did on-site evaluations. PNG chose Empirix’s Hammer XMS because it performed the best in real-world situations, and had the most comprehensive feature set. Particularly important was Hammer XMS’s ability to handle SS7 as well as IP protocols, including H.323 and SIP. PNG’s network works with both TDM and IP protocols, so it was looking for a monitoring solution that could handle both.

Hammer XMS provides monitoring for carrier class VoIP networks, and is designed to ensure the reliability and quality of next-generation services. It integrates active and passive VoIP monitoring, providing the truest assessment of network and service behavior. Synthesizing a wide range of critical operations data, from real-time metrics on network performance to extensive signaling and media metrics on every call, makes Hammer XMS a valuable asset across multiple groups within a service provider organization. With Hammer XMS, network engineering, planning, operations and customer care teams are more efficient and confident in rapidly deploying new services as well as in maintaining services with higher quality and at lower cost.

An Inside Look at Hammer XMS

The following illustration offers a high-level view of the differing values Hammer XMS delivers for network and service quality.



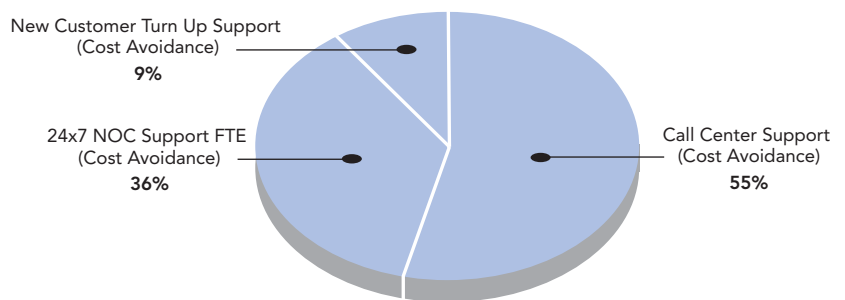
■ PowerNet Global Communications’ bottom line for the project: A projected, cumulative five-year net benefit of \$840,634, driven by reductions in customer turn-up costs, call center costs, and network operations center costs. An ROI of 330%, and a payback period of 10 months. PowerNet Global Communications is now able to monitor and proactively troubleshoot VoIP calls, has increased customer satisfaction, and will be able to more easily launch new revenue-generating services in the future.

The Bottom Line for PNG

A detailed analysis of the implementation shows that PNG will gain a projected, cumulative five-year net benefit of \$840,634 from Hammer XMS, driven by reductions in customer turn-up costs, call center costs, and Network Operations Center costs. The project has an ROI of 330%, and a payback period of 10 months. PNG is now able to monitor and proactively troubleshoot VoIP calls, has increased customer satisfaction, and will be able to more easily launch new revenue-generating services in the future.

The greatest financial benefit comes from staff savings related to PNG’s call center. Previously it could take a long time to resolve problems, and affected customers would contact the call center, requiring help with resolving problems. A single issue affects multiple customers, and so a single issue can spark numerous calls. Because Hammer XMS has significantly reduced the time it takes to resolve issues, fewer calls are being made to the call center. As a result, the PNG call center will be able to resolve problems for customers using less staff time, leading to a projected, cumulative \$597,278 in savings over five years.

PNG will save substantial amounts of money related to network operations center (NOC) costs. Previous to the use of Hammer XMS, when a trouble ticket was opened, a series of test calls had to be made to determine the cause of the problem, and engineers had to trace those calls to determine the source. The process increased time to troubleshoot a ticket. Hammer XMS automates monitoring and troubleshooting, allowing for faster problem resolution, and ensuring that the right issue is being solved. PNG can now track down problems 35% more quickly. This will allow the NOC support team to monitor traffic in less staff time, leading to a projected, cumulative \$398,185 in savings over five years. PNG is also currently working on using Hammer XMS to provide automated outbound alerts, so that the system can send out notifications whenever potential problems are found. This new process will lead to even faster troubleshooting times.



Cumulative 5 Year Net Benefit = \$840,634

PNG will also save a significant amount of money in savings related to customer and carrier turn-up. PNG will be able to verify service quality without going through a lengthy series of interoperability tests for turn-up; instead, the relevant voice quality information can be automatically gathered using Hammer XMS.

“Empirix’s Hammer XMS has been an important component of our ability to move into the wholesale business. Companies in the wholesale network market won’t even talk to you unless you have the proper monitoring and alarm tools to certify that you are proactively watching your network. Hammer XMS gives us that ability, and is allowing us to significantly expand our markets into areas we’ve never been able to go before.”

Jason Gaddis
 Manager of IP Solutions
 PNG

This will reduce the amount of staff time required for turn-ups, leading to a projected, cumulative \$99,546 in savings over five years.

Looking to the future, Hammer XMS will allow PNG to launch new services that it otherwise might not be able to offer. For example, PNG is considering providing SIP gateways for small and medium-sized businesses with PBXs. Hammer XMS will play a vital role in the new offering.

Hammer XMS is also helping PNG move into the wholesale network business. “Companies in the wholesale network market won’t even talk to you unless you have the proper monitoring and alarm tools to certify that you are proactively watching your network,” says Jason Gaddis, PNG’s manager of IP Solutions. “Hammer XMS gives us that ability, and is allowing us to significantly expand our markets into areas we’ve never been able to go before.”

The following chart provides a detailed, five-year analysis.

5 YEAR ANALYSIS							
Project Summary							
ROI	330%						
Payback Period (in months)	10						
Cumulative Net Value	\$840,634						
TOTAL PROJECT COSTS	\$254,375						
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Benefits	Year 1	Year 2	Year 3	Year 4	Year 5	Total	
New Customer Turn up Support (Cost Avoidance)	\$18,750	\$19,313	\$19,892	\$20,489	\$21,103	\$99,546	
Call Center Support (Cost Avoidance)	\$112,500	\$115,875	\$119,351	\$122,932	\$126,620	\$597,278	
24x7 NOC Support FTE (Cost Avoidance)	\$75,000	\$77,250	\$79,568	\$81,955	\$84,413	\$398,185	
TOTAL BENEFITS	\$206,250	\$212,438	\$218,811	\$225,375	\$232,136	\$1,095,009	
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Financial Analysis							
Net Present Value	\$617,691						
Payback Period (in months)	10						
ROI	330%						

ROI (Return on Investment) is the percentage return expected over a specified period of time. ROI is the total benefit divided by the total costs. This ROI metric is good for assessing the multiplier provided by the benefits relative to the total investment and costs.

Net Present Value (NPV) represents the cumulative present value of the expected return of a project over a specified period of time minus the initial costs of the project. This dollar figure provides visibility on the actual value of a project, taking into consideration the time value of money - the ongoing benefit of a project in today’s dollars. NPV tells you the magnitude of the project and if the project generates a profit.

Payback Period (or breakeven) is the timeframe it takes for the project to yield a positive cumulative cash flow. Payback period is a key measurement of risk but does not take into account cash flows after the payback period.

ROI, NPV and **Payback** should be used in conjunction to understand the rate, size and timing of the return.

Net Value (or Net Benefit) is the benefit delivered to the organization for the investment made in the project. Net Value is calculated by taking the total benefit minus the project costs.

About PowerNet Global Communications

Founded in 1992, integrated communications provider PowerNet Global (www.powernetglobal.com) works with many of the country's top communications agents and affinity groups to offer a wide range of integrated voice, data, and Internet solutions nationwide to residential and commercial customers. Leveraging its reputation in the industry with strong carrier partnerships, PowerNet Global offers tremendous opportunities for carriers, resellers, agents, and affinity groups. The company is headquartered in Cincinnati, and has offices in Jamestown, New York and Chicago. PowerNet Global has achieved consistent growth—throughout the telecom industry downturn—by developing and marketing an expanding array of competitive products, and maintaining a clear focus on delivering unrivaled customer support.

About Empirix

Empirix (www.empirix.com) helps organizations adopt complex communications solutions with confidence. It combines the industry's deepest knowledge of telecommunications and self-service applications with award-winning testing and monitoring solutions to ensure its customers realize the promise of their technology investments. Empirix is the only company with expertise that spans the evolution of these advanced technologies across multiple markets—from testing in R&D labs through monitoring the end-user experience. For over a decade, thousands of quality-conscious network equipment manufacturers, service providers and enterprises worldwide have trusted Empirix to reduce the time and cost of integrating new technologies into existing environments.

About Case Study Forum

Case Study Forum is the leader in the writing and production of ROI-focused Case Studies. In addition to a customer success story, each ROI Case Study provides insight into the business impact—the revenue, productivity and cost savings the customer achieved as a result of the investment made in the solution or service. For more information, please contact Case Study Forum at 508-380-8886, or visit www.CaseStudyForum.com.

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