

Modus Operandi: Taking Email Security to the Next Level

NEI Brings Flexibility and Cost-Effectiveness to Vircom's ModusGate™ Solutions





Executive Summary

NEI, a leading provider of server platforms, appliances and services for storage, security and communications software vendors, was selected by Vircom, an award-winning e-mail messaging security software company that needed to efficiently and rapidly expand its portfolio of network appliances. This paper describes how NEI applied its comprehensive approach to hardware, OS hardening, product branding and “Smart Services” management software to design and deliver Vircom’s ModusGate™ appliances.

From the smallest business to the largest enterprise, ModusGate provides fully integrated, completely hardened secure email gateways that cost-effectively protect against email-borne threats and network attacks.

Fighting the Threat from Email

As anyone with an email account knows, spam and viruses delivered by email are a daily threat to the health of computer networks. In the corporate world, that threat is multiplied by the number of employees with active email addresses. By some estimates, spam costs businesses \$20.5 billion annually in decreased productivity and technical expenses – creating a business vulnerability that must be contained or eliminated.

Enter Vircom, a Montréal, Canada-based provider of email messaging security software and hardware. The company’s innovative ModusGate email security and spam protection was already built into a server, but Vircom was not satisfied with the “one-size-fits-all” approach of its previous solution provider. Working collaboratively with NEI, Vircom was able to build a series of scalable hardware products for businesses of all sizes – while also optimizing inventory costs. The resulting product line uses Vircom’s proprietary technology to scan and process emails at speeds multiple times faster than the company’s previous devices.

According to Jean-Marc Robillard, Vircom’s director of product management, the heart of the email security company’s ModusGate solution is its proprietary Sequential Content Analyzer (SCATM). This technology combines multiple predictive and deterministic filters with an artificial intelligence-based content analyzer.

Bundled with anti-virus offerings from Norman and McAfee, the Windows-based ModusGate software engine seamlessly integrates with Microsoft Exchange, Lotus Domino or other standards-based email servers. By integrating with the Windows platform, ModusGate users are able to take advantage of Windows monitoring tools, backup and recovery user and group management. “We’ve found these features are particularly useful to Windows administrators,” Robillard noted.

While ModusGate already existed as an appliance product, Vircom and its users realized that the “one-size-fits-all” approach of its original OEM equipment manufacturing partner limited their ability to address customer needs.



“The single appliance was too expensive for the small-to-medium sized market of companies with 50 to 60 users,” Robillard explained. What’s more, it was not scalable to address the needs of larger enterprise customers with thousands of mailboxes. “Unless our customers started stacking boxes, Vircom was not considered an appropriate fit,” Robillard added, “even though our e-mail solution was ideal for their needs.”

Complicating matters further, Vircom’s original partner did not have the flexibility to respond to Vircom’s technology requirements. Specific configurations, chipset upgrades and product line extensions made engineering and testing difficult and cumbersome.

If Vircom was to continue to grow as a recognized provider of email security solutions, a strategic change needed to be made. That change was moving to NEI.

Making the Hard Work Easy

Vircom’s due diligence and the resulting RFP process for selecting a new partner involved five separate vendors. “NEI was the best possible candidate for our future appliance development,” Robillard said. “They had strong customer references, market leading technical ability and flexible processes that would reduce our time to market.”

“It was apparent that NEI had a system to expedite virtually every part of the process – from solution design, test and configuration control to after-market service, warranty and finished goods management – all with outstanding focus on product quality,” Robillard added.

“NEI’s extensive service capabilities also were vital to us,” Robillard said. “The company’s expertise in everything from integration control to back-end logistics and field maintenance helped us in a number of ways. For example, as a software company, Vircom benefited from having a partner that was on top of all the specific hardware and regulatory requirements involved in appliance development,” Robillard continued.



NEI offered Vircom a complete approach for appliance lifecycle management

NEI was the only appliance platform vendor to offer Vircom complete lifecycle management for their product line from the initial concept through the manufacturing process to updating the product until its end-of-life. This graphic depicts NEI’s lifecycle management process.



One extremely useful aspect of the development project was an OS “hardening” process initiated by NEI engineers. “NEI is able to manage the Windows OS throughout our product lifecycle, ensuring that we can proactively address security issues. This is not something that a typical integrator is able to provide,” he noted.

Delivering devices with a hardened operating system is part of NEI’s holistic approach to appliance development. The hardening process removes extraneous portions of the operating system that are not required to operate the appliance but can present possible security problems. OS hardening minimizes the appliance footprint to reduce memory and maximizes performance to virtually eliminate security vulnerabilities present in other platforms.

In the hardening process, NEI’s software team sent documentation to Vircom regarding OS parameters and then worked directly with Vircom’s engineers to ensure that the Windows requirements were optimized for the appliance. “Without NEI’s guidance, this would have been a protracted process,” Robillard said. “With their help, it was accomplished in a single week.”

Email Security Threats and the Need for Predictive Technology

According to a recent release from the Palo Alto, CA-based Radicati Research Group Inc., the worldwide installed base of active mailboxes will increase from 2 billion in 2008 to over 2.7 billion in 2012 – an average annual growth rate of 8 percent over the next four years.

In 2008, Radicati indicated, 78 percent of worldwide email traffic was spam. The analyst group expects this figure to increase over the next four years to some 83 percent in 2012. As previously mentioned spam costs businesses as much as \$20.5 billion annually in decreased productivity and technical expenses

Fortunately, Radicati estimates that only 56 percent of spam traffic was delivered to end users in 2008. The rest, the analysts say, was blocked by network or gateway spam filters. Radicati predicts this figure will decrease to 53 percent by 2011, as spam filters increase in efficiency and sophistication.

Vircom has developed sophisticated filtering and predictive technology with its core advantage– the proprietary Sequential Content Analyzer (SCA) technology. Combined with 14 years of engineering expertise in trapping spam, Vircom’s solutions consistently deliver real world performance of 98 to 99 percent capture of spam.

When scanning emails or attachments, SCA not only works based on standard signature analysis, it also uses predictive algorithmic technology to determine (in the absence of a signature) whether what it is processing is likely to be spam.

As a unique additional service, Vircom offers “Platinum Plus Support,” which includes remote monitoring and 24/7 support. Vircom engineers actively monitor network performance around the clock and send weekly reports on spam detection. If a monitored system is sent to be under attack, Vircom will take appropriate measures to reduce or eliminate spam attacks, and will contact the user to explain what happened. Corrective measures often taken before the system administrator is aware of any attack.

Vircom’s products integrate with the backup system on Windows, as well as active directory and user management features, and back-up user data such as quarantine reports and user reports. As a result, the application is truly part of the network infrastructure, not just a black box in front of an email server.

In the continuing fight to manage and prevent email security threats, Vircom is an emerging champion.



Twice as Fast and Less Expensive

The first ModusGate appliance from the NEI/Vircom partnership was the M100. Based on NEI's S-1200 appliance, this entry-level platform was significantly less expensive to produce than those from Vircom's previous partner. More importantly for the company's users, Vircom's product assurance department found the M100 to be more than twice as fast at processing mail as its previous appliance offering – despite being an entry-level product.

The new M100 processes 12-14 messages per second, as compared to 4-5 per second in the previous platform. "This was a huge step forward for us. In a single day of evaluation, Vircom was able to process 1.2 million pieces of mail with the new M100 device," Robillard said.

At this writing, Vircom is in the process of developing mid-market and enterprise units. The M150 unit is designed for larger and more complex requirements, providing both failover and redundancy features while still being targeted at small- to mid-sized businesses.

The opportunity and feedback Vircom has seen in the small-and mid-tier markets prompted development of an enterprise version of ModusGate. This new product, dubbed the MBlade, will be based on NEI's E-2900 configuration. The top-end flagship of the Vircom line, the MBlade will be generally available in 2009.

This line of innovative new Vircom products will also leverage NEI's ACE Element Manager and Update Services. Essentially a browser-based appliance management agent for either Windows or Linux environments, ACE provides unique capabilities to remotely monitor and manage deployed appliances. Updates and patches can be sent from NEI to devices in the field. ACE also embeds automatic lifecycle health check capabilities that allow agents to remotely monitor system functionality and performance. Additionally, ACE can be customized to integrate with the application to ensure optimal performance and secure operation.

Controlling Inventory in a Contracting Economy

Security is a growing segment of the IT market, and preventing spam is an ongoing network requirement. Spam is a bandwidth and employee performance robber. If removed, full network performance is restored, improving overall business productivity.

Nonetheless, the contracting economy has tightened near-term IT budgets. As with all businesses, Vircom needed to control costs and inventory management. Vircom's previous appliance vendor had tightly defined ordering policies that forced the company into the position of having to hold unnecessarily high levels of inventory.

NEI offered Vircom flexibility in stocking inventory. "NEI has a Web-based portal to manage inventory. That's extremely valuable to us," Robillard said. "At any given time after the initial product order, Vircom is able to see and review all aspects of our account with NEI, including work in progress, units ready to ship, demo stock and forward projections. It is a great tool that allows Vircom to adjust its order requirements on-the-fly based on its forecasted needs. We don't have to order a minimum number of units regardless of whether or not they have been sold," he explained. "NEI also provides us with 90-day forecasting projections to determine stock inventory requirements. That kind of visibility enables us to control our costs and streamline our operations."



Global Logistics

Vircom placed a high value on NEI's support, maintenance and global logistics – particularly the repair, replacement and refurbishing of stock.

Beyond flexibility of managing inventory, Vircom placed a high value on NEI's support, maintenance and global logistics— particularly the repair, replacement and refurbishing of stock. NEI maintains the demonstration and evaluation pool for their customers, ensuring that every product is shipped in “as new” condition. Refurbished products are brought up to “as new condition” when returned – ready to be shipped to the next engagement.

More than Hardware – NEI's Warranty and Marketing Advantages

“As they promise, NEI brings a high value-add process to product and service deployment,” Robillard noted. “NEI made it easy with clear and structured processes. They provided formal documentation around every part of the project, with due dates and follow-up reports. They flagged any aspect of the process that needed review for any reason.”

NEI's complete view of product development did not end when the appliance was assembled. The company then turned its team of experts to more intangible but equally important aspects of the product, including best-of-class warranty and branding materials.

Vircom created a customized warranty for its products by selecting from a menu of five service levels offered by NEI. The warranty agreement selected by Vircom includes service options typically reserved for much larger product manufacturers, such as on-site product replacement and technician troubleshooting. “NEI's service reach enabled us to immediately sell more effectively to multinational clients,” Robillard said.



The company's approach to product branding was equally meticulous. "We were driven by NEI to make sure we completely addressed product branding," Robillard said. "One area our clients cited for improvement was the need for more comprehensive documentation. NEI made sure we covered everything – from subtle marketing communications needs such as box labeling to bezel branding, complete user guides and quick-start tools for our customers."

Now we have everything we need to make sure the customer experience with the Vircom product is positive – something that was very much missing from our previous appliance partner's work," Robillard noted. NEI has even worked out an agreement with Vircom to manage the printing and packaging of our product information, which eases the administrative burden on Vircom.

"NEI really takes care of the logistics," he said.

Summary

By understanding Vircom's needs for cost-effective hardware solutions across scalable market segments, NEI was able to add value to the ModusGate appliances. NEI simplified and shortened the development process to deliver a range of products that capitalized on available technology, substantially improving the performance over Vircom's previous products, while reducing the cost.

To assist Vircom – a company with primary expertise in software development – NEI provided a comprehensive approach to hardware development, logistics, design and branding. The partnership between NEI and Vircom resulted in a top-performing line of products for the rigorous demands of email security while keeping development and inventory costs low in today's difficult global economy.

About NEI

Founded in 1997, NEI is headquartered in Canton, Massachusetts and trades on the NASDAQ exchange under the symbol NENG. NEI network appliance solutions are made to ease and enhance the deployment, manageability and security of IT infrastructure applications. With a heritage of providing product and service technologies tailored to support the entire lifecycle of its customers' appliances, NEI has become the appliance partner of choice for OEMs, ISVs and software integrators worldwide. For more information about NEI's products and services, visit www.nei.com.



25 Dan Road Canton, MA / 02021-2817 / telephone: 781 332 1000 / fax: 781 770 2000 / www.nei.com

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