

## Revenue Management Solutions

▶ [PRINT](#)

From technology to services, NEC delivers a one-stop shop for virtualization deployment.



▶ [Outline](#)



John Oakes  
Vice President,  
Information Technology  
RMS

"We are extremely satisfied with not only NEC's products, but also the professionalism demonstrated through their support and services teams. NEC is a name we can trust."

### ■ Background

#### ■ **NEC systems for a premium supplier of econometrics**

Revenue Management Solutions (RMS) is an econometrics services company that does quantitative modeling and statistical analysis of client data to assist in increasing long term gross profit and brand value for its global customers.

RMS was founded in 1994 to provide demand-based pricing guidance through the analysis of client sales data in the hospitality and retail industries. By helping clients understand customer value through the analysis of purchase behavior, they have assisted clients in increasing profit without loss of customer transactions, thus allowing those firms to gain a distinct competitive advantage over the long term.

A global organization, RMS has a worldwide client base that crosses dozens of currencies and cultures. With offices in Tampa, Paris and Singapore, RMS has a highly-skilled and diverse talent base of IT professionals, econometricians and consultants across the globe.

Serving several of the largest global restaurant chains, RMS continues to grow. RMS uses patented econometric modeling and statistical analysis to assist clients in understanding customer purchase behavior, and over the long term, in helping clients grow brand value. Clients of RMS include seven of the world's top-ten fast-food chains and three of the world's top-four hotel chains.

Additional services of RMS include media optimization and real estate services. RMS media optimization services analyze media and promotional efforts for efficiency and effectiveness. RMS real estate services identify sites with the greatest sales potential. They also evaluate ongoing performance to determine which sites will benefit most from the application of scarce capital resources.

RMS continues to develop powerful data-driven solutions that are changing the way leading retail and restaurant brands do business.

Says the company's President, Alex Wohlhueter, "Our main advantages are in two areas - the ability to provide the sophisticated statistical processing clients cannot



Alex Wohlhueter  
President  
RMS

replicate in-house, and the ability to provide cutting-edge data management services effectively."

For their clients, RMS consistently generates significant (often unprecedented) financial improvement and has a proven record of success for an impressive array of clients.

Their modeling processes, state-of-the-art data management center, and a seasoned consulting staff make RMS one of the most respected consultancies in the hospitality and retail industries today.

## ■ Installation Process

### ■ NEC systems for one of the largest Microsoft® SQL Server® systems in the world

RMS maintains one of the largest Microsoft SQL databases in the world.

Says the company's Vice President of Information Technology, John Oakes, "We are a rapidly growing company. Our data processing and storage needs have grown at a faster rate than our company."

In order to provide meaningful intelligence and develop effective pricing strategies, RMS must be able to process and analyze collected data in a timely and orderly fashion.

Oakes continues, "It is absolutely critical to have systems that are secure, reliable, scalable and powerful enough to keep up with our growth."

In addition to their database servers, RMS has many underutilized database and application servers, each with separate storage islands.

Multiple instances of common software have added to management and maintenance complexities.

For this equipment, RMS wanted to achieve consolidation of server resources in order to improve efficiencies, while also achieving better management of day-to-day server management operations.

RMS required a server virtualization strategy and solution to make better use of their hardware resources and to streamline technology.

For RMS, streamlined technology is critical. As more customers seek their services, the processing needs of RMS have grown exponentially - as has the transactional nature of data received from clients.

And with transactional data ten times greater than conventional data feeds, transactional data easily adds up to billions of new records monthly.

## ■ System Overview

### ■ The key to simplification was virtualization through NEC Express5800/A1160 Servers

For RMS, server virtualization was the fastest way to achieve greater efficiency and better data analysis.

NEC provided two Express5800/A1160 Enterprise Servers and its D-Series D8-20 SAN storage to realize server virtualization. RMS has consolidated a minimum of 20 general purpose rack mount application servers onto two NEC 4U Intel® Xeon® processor-based servers.

The consolidated servers hosted print serving, directory, file sharing and SQL query and data

mining. After the transition to server virtualization, these servers were decommissioned.

For RMS, the large Intel Xeon processor-based system represents a new category of server specifically designed from the ground up to unleash the unique server virtualization capabilities of the Intel Xeon processor 7400 series.

The NEC Express5800/A1160 system architecture features an efficiently scalable, highly reliable, and easily serviceable solution, perfect for system consolidation and server virtualization.

Each of RMS's Express5800/A1160 servers scales from 1-node, 4-sockets, 24-cores, and 256 GB of memory, to 4-nodes, 16-sockets, and 96-cores with 1TB of RAM. Each node boasts two redundant power supplies.

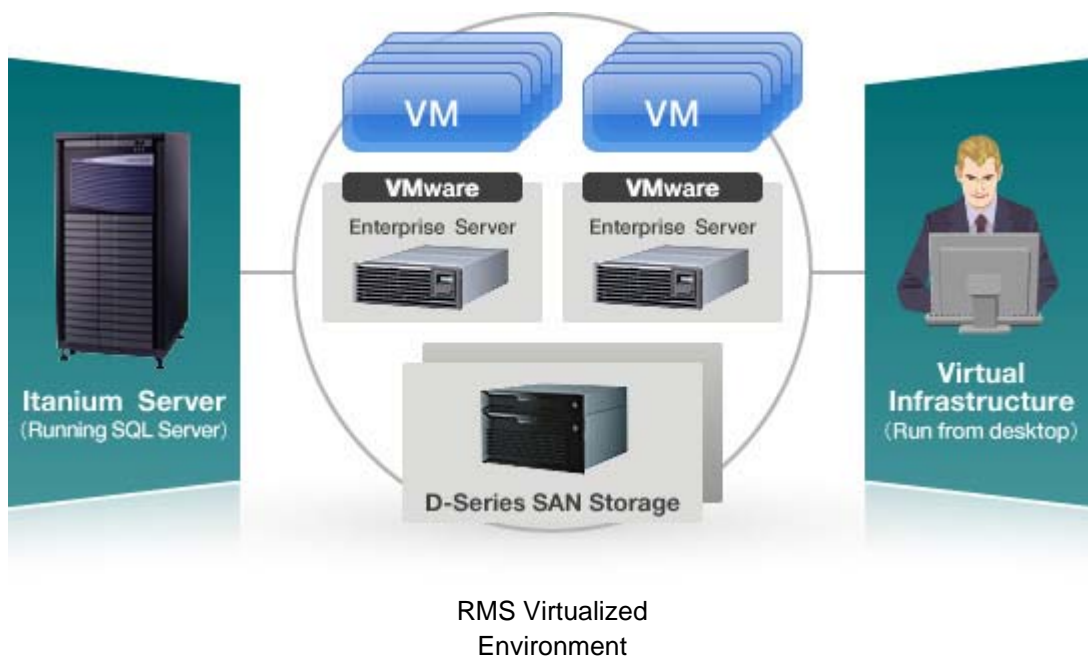
For RMS administrators, their installation appears as a four-stacked system. But from a logical system and O/S perspective, it runs as one collective compute node. Each node houses six hard drive slots. For a total of 24 across the complex. All compute resources under one compute image.

There are six hot swappable PCI slots per compute node.

With multiple processors on a job, RMS adds speed and power. The platform hosts the VMware® virtualization environment, which is helping RMS reach their objectives.

Explains John Oakes, "We are aggressively expanding our technology base – becoming more efficient. As we brought on a number of large firms, we had to reevaluate how we move forward with technology." For RMS, NEC server virtualization is a game-changer.

The NEC Express5800 series of servers are part of NEC's Dynamic IT Infrastructure offering— solutions that include servers, storage, virtual desktop solutions, and system software that are smart, flexible, adaptive to change, scalable, resilient and continuously evolving.



## Installation Results and Future Benefits

### Enjoying the virtues of server virtualization today, and preparing for tomorrow

The results of server virtualization at RMS have been immediate. As RMS has consolidated equipment, they've eliminated unnecessary hardware and redundant capital expenditures, and reduced power consumption. Real estate costs are stable, and CO2 emissions drastically reduced.

Since the virtualization, the data center's capabilities have expanded tremendously, while headcount for IT staff remains flat.

Adding convenience, the company can host different operating systems and applications, locally or from a remote site.

Provisioning a new server is a quick and streamlined process. By adding nodes efficiently, scaling is easy. Software management is automated within the virtual environment.

RMS is able to utilize the efficiency of its data center to better serve its customers, which in turn, contributes to the bottom line for both RMS and its client base.

With the obvious benefits of server virtualization, RMS hopes to eventually virtualize their entire environment, and NEC is working to become RMS's one-stop shop for technology and services, as well as expansion into new IT areas that now include virtualization deployment along with large-scale SQL server database hosting.

According to Oakes, "By being able to use large data sets, we can explore new areas of business that we have not previously considered."

### ■ Opinions of NEC Staff

Michael Nixon

Director

Enterprise Servers

- NEC Corporation of America.

Mike Heller

Senior Account Executive

Enterprise Servers

- NEC Corporation of America.

NEC's engagement with RMS dates back to 2004. To help support their growing data and processing needs, RMS selected NEC's Express5800 Itanium-based server. Two years after the deployment of NEC's Itanium server running SQL 2000, RMS needed a platform that could meet their performance and scalability requirements in a true 64-bit environment. They migrated to NEC's dual-core Itanium server running Microsoft SQL Server 2005.

When RMS looked to improve the efficiency and functionality of their non-database installation, they scoped out a "monster Xeon" server, NEC Express5800/A1160 solution.

The server is designed for the most demanding enterprise database environments and line-of-business processing requirements. NEC's enterprise servers perfectly address business and mission-critical operation demands, and are engineered for consolidation, virtualization, and high-performance business and database applications.

The NEC Express5800/A1160 server is a scalable, symmetric multi-processor system with equal access to system resources. The platform hosts the VMware environment. The entire focus of the RMS installation is about virtualization.

One of the great storylines is about environmental improvement. The virtualization solution substantially reduces cooling – RMS turned off 20+ servers.

For a company that is compute-intensive, RMS can add horsepower and allocate more cores or memory instantly. RMS can scale-up into the hardware without complexity. They can easily add sessions and workloads can be moved.

NEC Professional Services played a huge role in helping RMS scope their virtualization needs, design a transition plan, and load the equipment with RMS applications, many of which are financial, back-office applications. They then installed the system on-site.

RMS presented us with a huge opportunity. They are a company with a prestigious roster of clients running one of the largest SQL databases in the world. Taking the first steps into virtualization, they entrusted NEC to provide the solution.

The delivery, plus the technology, plus the relationship speak to NEC the company, and their capabilities.

## Related Links

### For US Customers

- [Express5800/A1160](#)
- [D-Series SAN Storage](#)

### For Non-US Customers

- [Scalable HA Servers](#)
- [NEC Storage](#)

## Customer profile

### RMS

Type of business	Consulting	
Address	777 South Harbour Island Boulevard Tampa, FL 33602	
Established	1994	
URL	<a href="http://www.revenuemanage.com/">http://www.revenuemanage.com/</a>	

[Outline](#)

[Contact](#)

Intel®, Xeon® and Itanium® are registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Microsoft® and SQL Server® are registered trademarks of Microsoft Corporation or its subsidiaries in the United States and other countries. VMware® VMmark™ is a product of VMware, Inc. All other trademarks and registered trademarks are the property of their respective holders.

[Top of this page](#)