

# Migrating to an Industry-Standard Platform Without Compromise

Five9 Network Systems helps Rochester Software Associates improve performance, enhance reliability, and reduce costs by migrating to servers based on Intel® Xeon® processors



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– Alan Wood,  
Director of Service Operations and  
Information Technology,  
Rochester Software Associates

Rochester Software Associates, Inc. (RSA) offers digital document production solutions that help organizations in a wide array of industries efficiently manage printing workflows. The company was using proprietary RISC-based servers and a UNIX\* operating system (OS) for its integrated solutions, managed services, and in-house test and development environment. But a surprise end-of-life announcement for those servers, plus the high costs of a proprietary OS, left RSA with an urgent need to move to new platforms. The company migrated its software to a Linux\* environment and, in collaboration with Five9 Network Systems (Five9NS), engineered a range of customized servers based on Intel® Xeon® processors. The new servers' superior performance and improved reliability enabled RSA to deliver a responsive and dependable customer experience while reducing costs.

## Challenges

- **Move to a new platform.** Replace discontinued RISC-based servers and avoid the high costs of a proprietary OS.
- **Provide a responsive user experience.** Enable customers to process print jobs rapidly, minimizing lag time and maximizing output speed.
- **Increase uptime.** Help customers reduce hardware-related issues and avoid downtime for mission-critical printing jobs.
- **Control costs.** Reduce the costs of producing and maintaining integrated solutions, keep customer pricing low, and minimize ongoing operational expenses for the company and its customers.

## Solution

- **Customized Five9NS\* servers equipped with Intel® Xeon® processors.** Five9NS designed multiple server models for RSA to deliver its solutions to customers and run in-house applications. Five9NS servers equipped with Intel Xeon processors accommodate a range of application requirements.

## Technology Results

- **Enhanced performance.** The new servers help reduce application response time and maximize print output speed while supporting large print jobs and complex data stream transformations.
- **Improved reliability.** The servers have dramatically reduced the number of hardware-related problems. RSA receives fewer service calls and has decreased the number of spares in inventory. Customers experience less downtime.



## Migrating to a New Hardware Platform Based on Intel Xeon Processors

RSA needed an OEM systems partner that could deliver multiple server configurations to support a variety of application requirements and customer needs. Rather than settling for less-than-perfect matches with off-the-shelf systems, RSA decided to work with Five9NS to create customized models. “Five9NS helped us to design multiple server configurations that provide exactly what we specified—we don’t have to pay for extra components that neither we nor our customers need,” says Wood. “By offering several server models, we can support large enterprises that need high performance, scalability, and component redundancy as well as smaller businesses that have more modest requirements.”

### Business Value

- **Reduced costs.** In-house, RSA has minimized OS licensing costs and substantially reduced hardware acquisition, power, and cooling costs by replacing more than 100 proprietary servers with fewer than 50 Five9NS servers. Customers can keep operating expenses low by running more applications on less hardware than in the past.
- **Improved competitive position.** By keeping internal costs and customer pricing low, RSA can maintain a competitive advantage in the digital printing marketplace.

A few years ago, RSA was surprised by an early end-of-life announcement from the company’s vendor of RISC-based servers. Faced with the sudden disruption of supply that put revenue at risk, RSA was forced to find alternative sources for its integrated digital print production solutions. “We had only three months warning,” says Alan Wood, director of service operations and IT at RSA. “We needed to find a new hardware platform that could provide the same or better levels of performance and reliability. And we needed to work with a vendor that could help us transition quickly.”

The high costs of the proprietary UNIX OS contributed to RSA’s decision to move to an open, industry-standard environment. “OS costs were skyrocketing,” says Wood. “To keep our customer pricing down and control our own internal infrastructure costs, we decided to make a move to Linux.”

The server models use a range of Intel Xeon processors, including the Intel Xeon processor E3-1275 v3. “By drawing from the broad portfolio of Intel Xeon processors, we can find the right balance of price and performance for each configuration,” says Wood.

Using a customized approach also allows RSA to take control of hardware changes. “Some hardware vendors change processors frequently, forcing us to constantly revalidate our software,” says Wood. “By choosing customized solutions from Five9NS, we can take advantage of the longevity of Intel Xeon processors and change processors on our timeline. We move to the next generation of Intel Xeon processors when we introduce new software capabilities that require more horsepower.”



# Intel® Xeon® processors deliver the performance and reliability RSA needs for integrated solutions

## Making a Fast Transition

The Five9NS team led RSA through a swift—yet comprehensive—process of scoping requirements, identifying the best components, creating prototypes, certifying the solution, creating the first article, and implementing ongoing support and maintenance. “Like many of our customers, RSA did not have the luxury of an 18-month product development cycle,” says Norm Erwin, sales and product delivery manager at Five9NS. “Once we understood RSA’s specific requirements, we were able to create designs and then capitalize on our close relationship with Intel to source the right components. We designed the new servers for an extended life cycle and selected Intel components that will still be available for several years so RSA won’t face such an abrupt transition to new components in the future.”

Working with Five9NS, and using industry-standard Intel® technologies plus the Linux OS, helped RSA produce new customer solutions and refresh its internal environment rapidly. “We went from design to prototype in just under a month,” says Wood. “We started shipping integrated solutions based on the new servers to customers shortly thereafter.” The company also refreshed legacy systems used by customers. Within a few years, RSA has replaced nearly all of its customers’ RISC servers with Intel Xeon processor-based servers designed and manufactured by Five9NS.

## Increasing Performance and Delivering a Responsive Experience

The new servers are helping RSA deliver superior application performance compared with the previous systems. “Whether customers are using our software to print from a Web interface, route print jobs across a large enterprise, or transform and print transactional data, they want a responsive experience,” says Wood. “Using Five9NS servers equipped with Intel® processors, we have increased throughput and substantially reduced lag time compared with our previous RISC platform. Our customers have a much more responsive interaction with the software and can accelerate the output speed of print jobs.”

## Improving Reliability and Streamlining Remote Support

Moving to the new hardware platform has helped substantially reduce the number of hardware-related issues. “The robust server design from Five9NS and reliable Intel components have made a huge difference in decreasing hardware problems. For example, the Intel® Ethernet Controllers are much more reliable—and offer wider compatibility with network equipment—than what we previously used,” says Wood. “We have a large base of installed systems. Instead of receiving hardware-related service calls every other week, we might have only one call per year. Our customers enjoy significantly improved uptime, and we can refocus our staff on other projects.”

## Lessons Learned

Through the process of evaluating new hardware vendors and server models, the RSA team realized they didn’t have to compromise. “There is no need to settle for servers that don’t meet your precise needs,” says Alan Wood, director of service operations and IT for RSA. “We were able to create a variety of server configurations that deliver the performance and reliability we need while meeting our desired price points with a customized solution.”

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The new, more reliable platform also helped eliminate the need to keep a large inventory of spare servers. "We used to keep fully configured spares on the shelf just in case we needed to ship out replacements quickly," says Wood. "With fewer hardware calls, we are able to reduce our spares inventory. The new platform also lets us load and configure much more quickly, so if necessary, we can unbox a server, load and configure software, and prepare the system for shipping within about an hour."

To help prevent problems and accelerate solutions if issues do arise, Five9NS included the Intel® Remote Management Module in all servers designed for RSA. "The Intel Remote Management Module is critical to our ability to remotely control and maintain customer servers—and our own," says Wood. "We might need to reset a system or diagnose a hardware issue. The Intel module has an easy-to-use interface that helps us accomplish those and other tasks quickly so we can provide responsive support."

### Controlling Costs

The migration to an industry-standard platform has helped RSA and its customers cut costs. "Moving from

proprietary UNIX to the open Linux operating system significantly reduces licensing costs," says Wood. "We benefit from those savings with our own IT environment, and we're also passing along savings achieved in producing integration solutions to our customers."

Meanwhile, using a high-performance hardware platform helps RSA and its customers do more with fewer servers. "The new platform enables us to support more applications and more users on each server," says Wood. "In-house, we have implemented virtualization and replaced more than 100 proprietary RISC-based servers with fewer than 50 Five9NS servers equipped with Intel Xeon processors. Similarly, our customers can buy fewer servers than in the past."

Consolidating the infrastructure keeps ongoing expenses low. "In our own IT operation, we are saving about 50 percent on power, cooling, and real estate," says Wood.

### Looking Ahead to New Designs

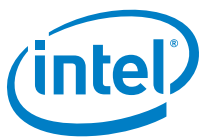
Given the successful deployment of the Intel processor-based Five9NS servers, it's not surprising that RSA is exploring additional configurations that can benefit its customers. "We're

### Spotlight on Five9 Network Systems

Five9 Network Systems, an Intel Platinum Partner and a specialty computer manufacturer, helps systems integrators, original equipment manufacturers (OEMs), and independent software vendors (ISVs) such as RSA to realize the business benefits of migration to open systems hardware and software. Learn more about Five9 Network Systems by visiting: [five9network.com](http://five9network.com)

now considering developing small-form-factor Intel® NUC servers to offer our customers an even smaller server footprint," says Wood. "By working with Five9NS, we're confident we can design an Intel processor-based system that delivers powerful performance in a dense, energy-efficient configuration."

Find the solution that's right for your organization. Contact your Intel representative, visit Intel's **Business Success Stories for IT Managers**, and check out **IT Center**, Intel's resource for the IT industry.



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