



## Carolinas IT delivers high-performance cloud with a Lenovo integrated platform



### Overview

As the cloud becomes bigger and changes shape, IT services providers need to do the same. Clients demanded increasingly cost-efficient, high-performance, reliable services, so Carolinas IT needed to upgrade and expand its production data center and disaster-recovery infrastructure. The company turned to Lenovo for an ambitious solution based on the Flex System platform and results were sky high. They were able to achieve a 320 percent increase in processing power, a 42 percent decrease in Microsoft licensing costs and a 30 percent decrease in data center footprint.

### Taking the cloud to the next level

Carolinas IT is a technology company with a large and varied menu of services, an ambitious mission and even bigger plans for the future. Unlike other IT providers that only facilitate managed services, cloud hosting or technology solutions, Carolinas IT offers all three and more. Based in Raleigh, NC, the company boasts secure cloud hosting, including server infrastructure, virtual desktops and offsite backup. It not only provides network support in the form of managed services, help-desk and end-user support, and onsite network engineering; but also offers advanced technology solutions, from unified communications to data center virtualization, including the hardware and software they need.

### The challenges of the cloud

Founded in 1996, Carolinas IT is now virtually all things IT, providing customized services and solutions to a wide range of clients. The company's focus more recently has been to tune its cloud offerings to meet the unique demands of highly regulated industries such as finance, healthcare and manufacturing. These clients require high performance and 24x7 uptime, at a competitive price.

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—Richard Helms,  
Director of Strategic Initiatives,  
Carolinas IT



“As a cloud service provider, it’s up to us to maintain reasonable economies of scale,” explains Dan Fleming, Senior Cloud Architect at Carolinas IT. “So we need to ensure high efficiency when it comes to density, manageability and uptime—yet at the same time we need to be able to provide flexibility for our clients.”

Add steady growth to that mix, and it’s easy to see why Carolinas IT needed to upgrade and expand its production data center and disaster-recovery infrastructure. With an eye to optimize performance and boost scalability, the company turned to Lenovo, a trusted partner, for IT solutions that would help take the Carolinas IT cloud to the next level.

### Flex System—a perfect fit

Rather than taking a traditional data-center approach to infrastructure, in which servers, switching and storage are viewed as three separate entities, Carolinas IT chose a Flex System solution that integrates these otherwise disparate components. The solution includes the Flex System Enterprise Chassis, Flex System x240 M5 servers and Flex System Fabric EN4093R 10Gb Scalable Switches.

“With clients who have servers that truly need to interact with each other on a quick level, the Flex System solution gave us that ‘east-west mobility’ for data and communications between equipment and servers that other standard solutions didn’t offer,” says Michael Verbic, Senior Solutions Architect. “By combining the compute and switching in a single chassis, the Flex System fit our needs much better than any other solution to handle the broad variety of clients we have. It was a different way of thinking for us, but the benefits have been tremendous in terms of speed, power and the flexibility of the systems.”

Getting to that point was a relatively swift process for Carolinas IT, thanks to testing support from Lenovo and a rapid proof of concept that allowed the infrastructure team to try out these new technologies first hand.

“During the initial configuration, Lenovo provided us a lab that we could use to test the solution and verify that it was going to work in our environment,” says Richard Helms, Director of Strategic Initiatives. “It was a key turning point in giving us the validation and peace of mind we needed before we purchased.”

The entire solution was scoped, tested and purchased within 30 days, meeting the company’s tight internal timelines.

### Solution components

#### Hardware

- Flex System Enterprise Chassis
- Flex System x240 M5 with Intel Xeon processors
- Flex System Fabric EN4093R 10Gb Scalable Switches

#### Software

- VMware vSphere
- VMware vCloud Air
- VMware vCloud Director

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Technical Services Director,  
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## Visible changes

Implementation was facilitated by Lenovo Enterprise Solution Services and completed within the first quarter of the year. Perhaps best of all, the migration was performed without any disruption of service. “As far as the customers were concerned, there was no negative impact whatsoever,” Fleming reports. “It’s one of the ironies of IT—that if you’re doing your job well, nobody even knows you’re there.”

Carolinas IT has put the infrastructure to work running a demanding virtualization stack based on VMware vSphere, both for internal purposes and as service offerings for its customers. Those offerings include VMware vCloud Air and VMware vCloud Director for secure public and private clouds, as well as VMware Horizon View for virtual desktop infrastructure.

Since going into production, the Flex System solution has generated results that are nothing short of astonishing for Carolinas IT. Processing power has increased a staggering 320 percent. Better allocation of resources has resulted in a 42 percent reduction in Microsoft licensing costs, and higher density has resulted in a 30 percent reduction in footprint, which translates to additional savings on power and cooling for the organization.

## The Lenovo difference

The team at Carolinas IT is quick to credit their partnership with Lenovo as key to the success of the implementation, from start to finish. “It’s been great to have a partner that values taking care of their clients and working side by side with them,” says William Garner, Technical Services Director. “The Lenovo team has just been fantastic to work with, and they’ve enabled us to take care of our own clients. It’s one of the things that really sets Lenovo apart.”

“Lenovo worked hard to understand our needs and our clients’ needs,” adds Helms, “and that just makes a huge difference.”

The Lenovo product line was another major attraction for Carolinas IT, particularly the Flex System x240 M5. “The M5 is hot off the presses, so to speak, but at the same time it’s a product of a very long, stable legacy,” says Fleming. “I know Lenovo works closely with Intel on their roadmap, and the core density of this latest generation of blade servers is really key to helping us achieve greater densities and reduce our licensing costs.”

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## The road ahead

For Carolinas IT, the road ahead is lined with Lenovo. The team is planning to purchase more Flex System chassis and is also evaluating XClarity, Lenovo's new systems management solution. Says Fleming, "we're going to continue working with Lenovo to help our efficiencies and economies of scale, and to reduce administrative burden on our end."

## For more information

To learn more about Lenovo systems contact your Lenovo Sales Representative or Lenovo Business Partner, or visit: [lenovo.com/systems](http://lenovo.com/systems)

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