



LORAS COLLEGE™

# Loras College keeps student services running full speed ahead with innovative data center technology from Lenovo

Lenovo™



Loras College is a Catholic liberal arts college located in Dubuque, Iowa. The college offers more than 50 undergraduate majors, minors, and pre-professional areas of study, as well as graduate degree programs. More than 1,500 students and 135 faculty members work across a scenic 65-acre campus.

## Remedying slow response times

Students and faculty alike rely on IT services running smoothly to complete assignments, study for exams, and further their research, so a high-performance underlying infrastructure is key. When Loras College realized its existing IT environment, made up of aging server and storage systems, was struggling to keep pace, it knew it was time to take action.

Tom Kruse, CTO and Director of Procurement & Budgeting at Loras College, begins: "Tight budgets meant that we'd delayed purchasing new hardware for a number of years, and our existing systems simply could not meet demand anymore."

Jeremy Bushman, Network Administrator at Loras College, elaborates: "We began experiencing performance issues, particularly in the middle of the day when hundreds of students and members of staff would log on simultaneously and all try

## Overview

With hundreds of students and faculty members all trying to log on to Loras College's systems at once every day, it's little wonder its aging infrastructure couldn't keep up. To boost performance and accelerate response times, the college deployed a software-defined infrastructure based on Lenovo System x3650 M5 servers and StorMagic SvSAN virtualization technology. Supported by the Lenovo solution, Loras College now delivers smooth, seamless IT services – helping to further students' learning.

"Since implementing the Lenovo solution, performance has improved dramatically and response times have fallen, cutting the number of help desk calls we receive."

—Jeremy Bushman,  
Network Administrator,  
Loras College



to access email and online academic resources on the Storage Area Network [SAN] at once. System performance would get bogged down, and it would typically take a few minutes to open large files. The wait was very noticeable, and we'd often get complaints from users fed up with slow response times."

With both its server and storage infrastructure running out of steam, Loras College struggled to improve performance.

Tom Kruse says: "Even if we replaced one part of our infrastructure, the entire environment would still only run as fast as the oldest, slowest component. That's when we decided to look into a fresh approach with a converged solution."

### Starting anew with a software-defined infrastructure

With years of experience using Lenovo System x servers, Loras College was keen to partner with Lenovo to transform its data center.

Tom Kruse recalls: "We were only too happy to visit the Lenovo briefing center in Raleigh, North Carolina to get a closer look at the latest Lenovo technology. We appreciated being able to speak to the experts about our specific requirements – they were soon able to figure out the right solution for us."

Working closely with Lenovo and implementation partner Communications Engineering Company, Loras College installed and configured three Lenovo System x3650 M5 servers. Powered by the Intel® Xeon® E5 processor family, the Lenovo servers deliver the high levels of performance needed to support a fully virtualized storage environment based on StorMagic SvSAN software and VMware vSphere technology – eliminating the need for a physical SAN. The Lenovo systems arrived on-site as a pre-integrated, pre-validated rack of compute, storage – including the StorMagic SvSAN software – and networking.

Today, Loras College runs 63 virtual servers on its Lenovo infrastructure – covering everything from mission-critical file and application servers to academic and back-office administrative software.

### Solution components

#### Hardware

Lenovo System x3650 M5 with  
Intel® Xeon® E5 processor family  
Over 1,000 Lenovo clients, including  
Lenovo ThinkPad T460

#### Software

Microsoft Windows Server  
VMware vSphere  
StorMagic SvSAN  
Ellucian Banner



Jeremy Bushman remarks: “With Lenovo servers and StorMagic SvSAN software, we’ve gained a single streamlined software-defined IT environment. Powerful virtualization capabilities mean that we can move virtual servers across the three physical servers very easily, enabling us to get the most out of our hardware resources.”

Impressed with the high build quality of its new Lenovo servers, Loras College decided to replace its existing fleet of student laptops with Lenovo ThinkPad T460 devices. Tom Kruse comments: “We’re very proud of the fact we provide a laptop to every student to support their studies. Lenovo ThinkPad laptops are robust, durable machines that come at a great price-point, so it was an easy choice for us to make.”



### Delivering grade-A services

By pooling compute and storage into a single shared virtual infrastructure, the Lenovo solution has given Loras College the performance boost it needed to improve user services.

Tom Kruse says: “As we’re now free to move virtualized environments between the three physical servers as and when needed, there’s no danger of any hitting capacity, as was often the case beforehand. And because it’s a converged, all-in-one solution, there’s no delay in moving VMs around – enabling us to keep performance levels high, particularly at peak hours.”

Jeremy Bushman confirms: “Since implementing the Lenovo solution, performance has improved dramatically and response times have fallen, cutting the number of help desk calls we receive. In fact, the only performance issues that are reported on now are down to Internet speed – not our systems.”

“We were able to replace five physical servers, a blade center with fourteen physical blade servers, three VM servers, and three SAN solutions with the Lenovo converged infrastructure. The three Lenovo System x3650 M5 systems take up just 6U, or 10.5 inches – significantly reducing our footprint, slashing power consumption, and cutting energy costs.”

—Tom Kruse,  
CTO and Director of Procurement &  
Budgeting,  
Loras College





Thanks to the converged nature of the Lenovo solution, Loras College has transformed its data center, significantly simplifying management and cutting operational costs.

Tom Kruse explains: “We were able to replace five physical servers, a blade center with fourteen physical blade servers, three VM servers, and three SAN solutions with the Lenovo converged infrastructure. The three Lenovo System x3650 M5 systems take up just 6U, or 10.5 inches – significantly reducing our footprint, slashing power consumption, and cutting energy costs. What’s more, the all-in-one nature of the solution means that there is very little to manage on a day-to-day basis, and it’s very user-friendly.”

Delivering high levels of performance, flexibility and reliability, the Lenovo solution is helping the college to deliver IT services that support students’ studies without breaking the bank.

Kevin Kraus, System Administrator at Loras College, concludes: “With our Lenovo converged infrastructure solution, we spend less but we don’t get less. Usually in IT, there’s a trade-off between price and performance, or price and the quality of the hardware – this is certainly not the case with Lenovo. With Lenovo, we get the best of both worlds.”

### For more information

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

For more information about Loras College, visit: [www.loras.edu](http://www.loras.edu) or connect with @lorascollege

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