

CUSTOMER SUCCESS STORY:  
UNIVERSITY OF BERN

# University safeguards wired and wireless access for students with improved network management.

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UNIVERSITÄT  
BERN

## Customer Profile

Industry: Education  
Company: University of Bern,  
Switzerland  
Employees: 4,500

## Business Impact Summary

### Business:

The University of Bern is Switzerland's third-largest university, with 12,000 full and part-time students. The University was founded more than 170 years ago, and has grown to become one of the country's most prestigious institutions, with 180 different study programs.

### Challenge:

Today's students don't just expect rigorous teaching and excellent research facilities; they also demand high-speed Internet access — both wired and wireless — from anywhere on campus, interactive lessons and online course registrations.

### Solution:

The University of Bern deployed CA's Network Management solution to ensure the availability and performance of key systems and its wired and wireless IT infrastructure through a single, unified view.

### Result:

Greater network reliability means the university is able to deliver cutting-edge services that students require, including electronic class registrations and grade postings, distance learning, as well as email and Internet access for thousands of students, faculty and staff while simultaneously reducing the cost to provide these services.

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## Business

### At the heart of learning, Switzerland's third-largest university

The University of Bern is one of Switzerland's oldest universities, founded in the early 19th century. In the more than 170 years since the first students arrived, the university has been transformed. It is now fully chartered, and offers more than 180 programs of study in seven faculties: Old Catholic and Protestant theology; law; economics and social sciences; medicine; veterinary medicine; humanities; and natural sciences.

Today, more than 12,000 part- and full-time undergraduate and graduate students attend the University of Bern, making it Switzerland's third-largest university. The institution prides itself on its modern and flexible teaching methods, and students are encouraged to learn about subjects in a broad context through inter-disciplinary teaching.

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## Challenge

### Making traditional teaching methods modern

Like many educational institutions, the University of Bern is extremely proud of its history and traditions. However, to continue to attract the best and brightest students and academics, the university must combine those traditions with the very best in modern facilities and teaching methods.

In practice, this means offering services such as e-learning, interactive teaching applications and online course registrations. In addition, today's students increasingly expect colleges to provide high-speed Internet access both inside and outside the classroom, with wireless access across campus.

The problem is that the University of Bern has finite IT resources and personnel — and this kind of network can be extremely complex and time-consuming to manage. "Wireless adds a complicated layer to infrastructure management, requiring ongoing authentication and security measures," explains Fritz Butikofer, Senior IT Manager with the University of Bern.

### The power to keep up with change

The University of Bern also needed a way to automatically discover, configure and monitor its wired and wireless IT infrastructure. "We wanted a management solution that would take the guesswork out of configuring and reconfiguring both our wired and wireless adds, moves and changes on a daily basis," says Butikofer.

Among the wired servers and devices that required 24x7 network monitoring are 100 Sun Solaris and Linux servers in the central cluster, 30 Solaris, FreeBSD, and Linux IT servers, 6,000 PCs, 4,000 Macs, 3,000 UNIX machines and 800 printers.

In addition, the university needed to optimize its infrastructure to ensure that demanding services, such as interactive course programmes and campus email applications, were always available and performing well. This required a management solution that could work across multiple platforms and technologies, since the University's infrastructure was extremely wide and complex.

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#### Fritz Butikofer

Senior IT Manager, University of Bern

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**Fritz Butikofer**

Senior IT Manager, University of Bern

These increased management capabilities were particularly important because the University of Bern had recently invested heavily in a cutting-edge Gigabit Ethernet network that provided high-speed links between the campus and the nearby University Hospital, as well as other remote university sites. Without effective management, there was no way to monitor how well this investment was serving the business.

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## Solution

### Proactive and automated network management

After evaluating a number of network management products, the University of Bern chose CA’s Network Management solution featuring the company’s SPECTRUM® network fault management platform. The CA solution ensures the availability and performance of the university’s local and wide area network through patented root cause analysis technology that accurately pinpoints the real cause of IT failures, thereby ensuring that the university’s IT staff always knows where the problem is within minutes.

The CA Network Management solution automatically discovers and configures new, wired network devices and servers as they are added across the university’s local and wide area networks. It also auto-discovers new wireless devices, and monitors and analyzes all network and systems availability and performance around-the-clock. In the event of device or service degradation or failure, the CA Network Management solution generates alarms via telephone, email, and/or text messaging.

A graphical, web-based interface provides a centralized view into the multi-vendor, multi-technology infrastructure. “CA’s user interface is incredibly intuitive and user-friendly, and enabled our helpdesk staff to be up and running — and extremely productive — in one week without specialized training,” Butikofer stated.

Butikofer’s team also uses an advanced management module in the CA Network Management solution to perform application response time testing that enables administrators to quickly assess service performance levels and availability.

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## Result

### Top-class performance

Many routine, previously manual IT administration tasks are now automated through the CA Network Management solution, including alarm escalation, device discovery, configuration and network monitoring. As a result, the University of Bern can support its 180 departments and 16,500 users with just three full-time administrators.

“CA’s Network Management solution gives us all the information we need at a glance to manage our complex distributed environment,” comments Butikofer. “The fault isolation and root cause analysis pinpoints the real cause of IT failures, so that we know where the problem is within minutes.”

This visibility combined with the solution's remote management capabilities has enabled the university to:

- Reliably ensure the availability and performance of its wired and wireless network
- Free up IT staff from day-to-day, manual operational tasks
- Reduce the time needed to pinpoint and troubleshoot network issues

Perhaps most importantly of all, the CA Network Management solution has enabled the University of Bern to transform IT management from a cost centre into a service.

Since 2005, the university has offered network services to outside educational institutions, including the University Hospital and University for Applied Sciences. These clients rely on the University of Bern's IT department to provide them with information about their own network operations, using CA's network and voice management solution.

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To learn more and see how CA software solutions enable other organizations to unify and simplify IT management for better business results, visit [ca.com/customers](http://ca.com/customers).