splunk>

CASE STUDY

The University of Fribourg Resolves IT Issues Faster and Improves Developer Productivity with Enhanced Observability

Key Challenges

Before Splunk, whenever the University of Fribourg's campus management application experienced issues, students were forced to wait hours for it to be debugged. This downtime affected nearly every aspect of university life, from the ability to register for classes to campus navigation.

Key Results

After gaining visibility into every key component of the application, University of Fribourg's development team can identify issues ahead of time and resolve them faster, improving user experience for students and faculty alike.

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UNIVERSITÉ DE FRIBOURG
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Industry: Higher Education

Solutions: Observability

Technology is central to student success at University of Fribourg.

The University of Fribourg attracts students and researchers from every part of Switzerland and all over the world,since its founding in 1889. More than 10,000 students in the Bachelor, Masters and PhD programs receive first-class personal support from over 800 professors, lecturers and research assistants.

With a campus spread across the city of Fribourg, students and staff can stay connected through its Campus Management app. This software integrates applications that students use daily to see what's on the menu at the dining hall, use an interactive map to find their way through campus, book a tennis court, check their grades and manage their university life. When something goes wrong with Campus Management, both students and faculty experience disruption. If a student can't register for classes and exams in a timely fashion, this inconvenience can even jeopardize their semester. To prevent this, the university's IT and development teams needed more visibility into its applications to quickly resolve issues and create an optimal experience for students not just when they're on the application — but also during their time at the university.

Outcomes

- 4x faster issue resolution
- Increased developer productivity when finding and fixing issues
- Improved app availability and reliability

From the dining hall to the tennis courts

Campus Management is central to nearly every component of life at University of Fribourg, which is offered through both mobile and web. "The scope of the software is quite wide," says Dylan Montandon, program analyst. Along with 15 fellow in-house staff members, he develops and runs the application, which is composed of about 100 different components.

A seemingly straightforward task such as scheduling an exam, for example, involves 10 interconnected services within the app that must successfully communicate with each other. "It's not a simple application," Montandon says. "Because there is a lot of interaction between different services, it's very difficult to find the root of a problem." Digging into static logs to debug an issue was a tedious, hours-long effort that didn't reliably yield answers. With the help of Digital Architects Zurich, a Splunk partner,

the university was able to instrument its application stack and configure it to separate different applications.

The University of Fribourg was already using Splunk Enterprise to monitor its environment, but needed more visibility into application performance. "The goal is not to have the user tell us there is a problem," says Montandon. "Because if they see something, it's too late. We want to be proactive."

Bringing resolution from hours to minutes

With Splunk, Montandon and his team can resolve performance issues before they reach users. When a service within the application stops working, Splunk Application Performance Monitoring (APM) gives detailed information so developers can fix the error in minutes, not hours — improving productivity and freeing up engineers' time to work on other priorities. "Now that we have [Splunk] Observability, we can visualize the interactions among apps and quickly pinpoint where the error occurred," Montandon says. "It's the key to the problem."

> Because of Splunk, we now have a big picture of the application and what is involved. Every person on the team is able to understand it."
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> **Dylan Montandon,** Software Developer, University of Fribourg

Besides resolving performance issues, the development team also uses the Splunk platform to improve code within the application's database. "We are developers; we are not sysadmins," says Montandon. "It was really complicated for us to see the critical requests in the database, so now we can improve it and reduce bottlenecks."

Splunk technology also enables collaboration between new developers, architects and consultants, who previously struggled to understand how the application interacted with other services. "Now we have a big picture of the application and what is involved," says Montandon. "Every person on the team is able to understand it."

Next up: ramping up cross-department collaboration

The next big step for the University of Fribourg is to configure alerting and self-service capabilities so that other IT staff can proactively check on and resolve performance. The organization also plans to unlock cross-department collaboration with Splunk; specifically, the infrastructure team is interested in monitoring the hardware portion of the university's environment. Looking forward, the University of Fribourg is planning to manage all Splunk functionalities through a single tool. "It's the goal to have everything on one app," Montandon says.