

IT University of Gothenburg students gain valuable skills through IBM System i Academic Initiative



Göteborg University (more usually rendered Gothenburg University in English) is the largest university in Scandinavia. Based in Gothenburg, the second largest city in Sweden, the University has about 50,000 students and 5,000 employees across eight faculties and 57 departments. The IT University of Gothenburg is a joint venture between Gothenburg University and Chalmers Institute of Technology.

With no standard infrastructure for supporting software development environments, information technology students at the IT University of Gothenburg were using a variety of self-built systems to host their projects. If a client-server architecture was required, a student might set up the server component on his own laptop and link other students' laptops to it. On the software side, students were using a variety of free development toolkits, application servers and databases—and had very limited exposure to enterprise-grade software.

Overview

■ **Challenge**

The IT University of Gothenburg had limited computing resources available to students wanting to develop software. Students had little or no exposure to enterprise-grade hardware and software, hindering their preparation for future careers in IT. The University wanted to support the widest possible variety of platforms, but had very limited funding.

■ **Key Benefits**

The System i platform supports IBM i5/OS®, IBM AIX®, Linux® and Microsoft® Windows® in a single physical footprint, maximizing flexibility while keeping costs low; students are gaining valuable experience using enterprise-grade tools to develop real-life business applications.

■ **Solution**

By implementing an IBM System i™ server and participating in the IBM Academic Initiative for System i, the IT University of Gothenburg gained a low-cost heterogeneous computing platform and began building close links between students and external partners. The University is building an Academic Network around its System i platform, bringing together students, IBM Business Partners, independent software vendors and System i customers for mutual benefit.

Bill Sullivan, Senior Lecturer at the IT University of Gothenburg, comments: “We wanted to prepare our students better for careers in industry, and a key part of that was to expose them to a variety of enterprise platforms. The challenge was to do this within very strict budgetary constraints—and the IBM System i platform was the obvious answer, with its unique ability to support i5/OS, AIX, Linux and Windows simultaneously in the same physical footprint.”

The robustness of the System i platform was also a factor in the decision. The University has very limited internal server administration skills, and wanted to provide a stable platform for development that would require minimal maintenance. “The System i simply never goes down,” says Bill Sullivan. “That level of reliability keeps our costs as low as possible.”

One platform, four operating systems

Based on Bill Sullivan’s positive experience of working with IBM at a US institution, the University approached IBM Sweden for assistance. The IBM team proposed that the IT University of Gothenburg take advantage of the IBM Academic Initiative for System i program, and helped the organization to implement a new IBM System i 520 server.

“Our first System i machine had a single POWER5™ processor with just 43 percent of resources active to keep the cost as low as possible,” says Sullivan. “This server had four logical partitions running i5/OS, AIX, Linux and Windows—and was supporting up to 140 users.”

As demand for the System i platform grew, the system was upgraded in order to accommodate the greatly increased capacity requirements. Some 40 students are now taking courses on System i administration, and dozens more are using the System i as a platform for developing applications that run under i5/OS, AIX, Linux and Windows.

“The System i was a big hit with students from the word go,” recalls Sullivan. “We had 100 students for the first briefing session, and around 20 of them were asking to be trained up as Systems Administrators. There was, and still is, a real excitement about working with a platform that can run four different operating systems side-by-side—System i is pretty exotic in that sense.”

Taking the initiative

The ability of the System i platform to support not only tried-and-trusted legacy workloads but also cutting-edge Linux and Java™ workloads has led to a resurgence in demand for the platform. With System i skills in enormous demand in the commercial world, students at the IT University of Gothenburg are gaining valuable skills that can directly impact their later career development.

Says Bill Sullivan, “The System i platform is renowned for its reliability and availability, so it tends to be used in mission-critical environments. Businesses therefore want skilled, experienced people to run the platform, which makes it tough for graduates to get a foot in the door. With the IBM Academic Initiative for System i, the IT University of Gothenburg is giving our students vital skills, certification and real-life business experience on the platform.”

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As part of the Academic Initiative program, IBM provides education content and a variety of training and course materials to the University. “A top System i expert from IBM spent two days with us, which was an immensely valuable experience for the students,” says Bill Sullivan. “We have also received assistance from Business Partners for loading new software and performing system upgrades.”

Sharing the benefits

The IT University of Gothenburg is now aiming to expand its System i program to make itself a regional hub for education on the platform. Internally, the platform brings together 50 faculty members and 1,000 students across various departments, and externally, the University is in discussion with several academic institutions about sharing the System i server.

“We expect our System i environment to grow significantly—there is a lot of motivation among the students,” says Bill Sullivan. “The logical partitioning capabilities of the System i platform mean that we can give dozens of users their own completely independent environments on the same physical server. If a user somehow manages to destroy his or her partition, all the other partitions will be totally unaffected. This gives us the confidence to invite other universities to use the platform alongside us.”

Beyond using it as a development platform for students, the IT University of Gothenburg plans to run some new collaborative systems on the System i platform. It will encourage students to develop the new applications themselves—giving them the opportunity to apply their skills to real applications rather than just test environments.

From education to business

The IBM Academic Initiative for System i aims to build strong local relationships between universities, colleges, clients, partners, independent software vendors, user groups and IBM itself. The program also offers resources and career development prospects for students, creating a pool of skilled graduates ready for commercial work.

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“Our program for students is totally focused on giving them real-life business experience, and to this end we have set up a number of links with IBM Business Partners and software vendors,” says Bill Sullivan. “A number of our students are currently working on a project to streamline and Web-enable a legacy ERP application—effectively acting as the development experts for two external companies.”

The student team in question is using IceBreak Web-enablement software from System & Method International, a Danish software developer, to modernize and streamline an ERP and freight-management system from Logit, a Norwegian software developer. Other joint projects are in place involving companies such as Intenia, IBS and Volvo Information Technology.

“The external partners are very impressed with the skills shown by our students, who are providing real work that will actually be used in commercial applications,” says Bill Sullivan. “In many cases, students are receiving provisional job offers on the strength of this work, which is ultimately the whole point of the Academic Initiative program: to create the next generation of highly skilled engineers.”

For more information

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