

Process in a stable environment through Interstage

Registration Work at Youngnam University

Case Study

The Challenges

- To manage the system against highly concentrated transaction
- To provide satisfactory response time
- To construct a stable web system

The Benefits

- Process 70% of the whole request in five minutes
- Stable and high performance compared to the previous system
- Anywhere, offer to the student through online system

The Expertise

Fujitsu's Interstage enabled not only flexible integration of system but also empowered the speed of mission critical operations through increased overall system performance.

Youngnam University, one of representative private universities in Korea, has 50-year long tradition since it was established in 1947 and is currently educating 35,000 students.

It is actively promoting campus informatization.

Its investment in school informatization and computerization is so huge that the university started 'Internet Disk Service', which allows students to maintain their private information at a virtual storage on the Internet, for the first time among universities throughout the country.

Since June 2003, the university has been performing jointly with Fujitsu Korea a project that converts EASY (Education & Administration System for Youngnam University), which is the integrated information system of the school, from a client/server system to Web-based one.

The objectives of the EASY Web conversion project are:

1. C/S reconstruction of research management system
2. Web conversion of Education & Administration System (EASY)
3. Construction of open employment management system
4. Construction of attendance management system
5. Reconstruction of registration system

The ultimate goal is to construct a stable Web system based on J2EE.

Existing EASY system was based on client/server, so students and staffs had to come to the school and do works using terminals connected to servers except some tasks.



Mr. Byeong-wan, Lee
Information staff at
Youngnam University;
in charge of
registration system



Ms Jin-ho Kim
Information staff at
Youngnam University;
the general manager
of EASY Web
conversion project

User Profile

Youngnam University

1947 Daegu, Korea

Profile : Established in 1947,
youngnam University is current
educating 35,000 students.

Youngnam's investment in school
informatization and computerization

Fujitsu Korea suggested an upgraded EASY system that is stable and unceasing, which adopts the company's latest equipment, technologies and solutions. Accepting the suggestion, Youngnam University started the sweeping reconstruction of the system in June 2003.

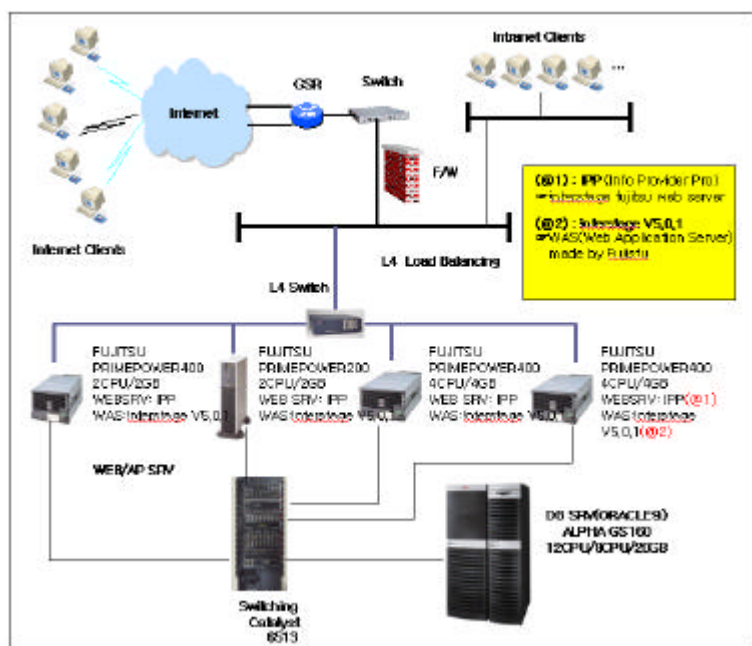
In particular, registration work, which is a key process on the Web, was the biggest trouble for the university. Students choose papers that they want to take and apply for them directly through the Internet. Because each lecture limits the number of students attending it, students prepare a list in advance and enter them through the Web as soon as registration begins. If one is late even a moment, he/she may not be able to attend desired papers. Therefore, on the registration day, a great number of students sit in front of PC and wait on line for the opening of registration. This generates a large number of transactions per unit time and the computer system at the university is loaded in the highest, suffering stops and delays. It is the most stressful moment for information staffs who monitor the system. It is because, if the system goes down, students make a flood of complaints on the BBS of the school homepage.

Registration process is a great problem not only for the university but also for the students. Information system staff, Lee Byeong-wan, who is in charge of registration, said:

“Characteristically, the university registration system has to process highly concentrated transactions for the first five minutes from the opening. We had run both C/S and Web systems for registration until the first semester of 2003 (February 2003), and particularly the Web system was opened without WAS using the pl/sql function of Oracle 9i. When we tried to create html documents on the DB server and send them to each PC, the DB server had to bear 70% of load and, as a result, screen change was extremely slow and the Web

server sometimes went down (then we had to reboot the system or limit the number of simultaneous users). Despite such a measure, response time was 40 seconds, quite unsatisfactory for students. Even worse, those to register using C/S had to come to the school during the holiday.”

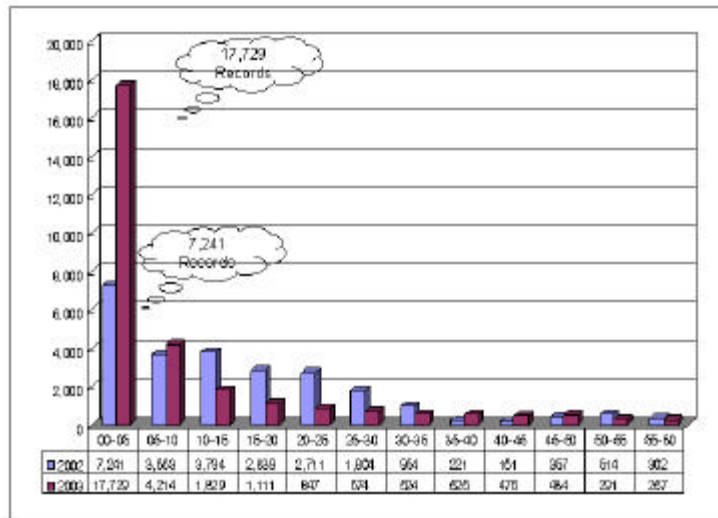
To improve these problems, Fujitsu Korea redeveloped the part of registration by applying WAS (Interstage) that adopts the company’s latest technologies.



The new registration system based on Interstage was operated in the second semester of 2003, showing stable and high performance compared to the previous system. That the registration system successfully managed the rapidly soaring number of transactions means that Interstage can process any tasks within the university in a stable manner.

Lee Byeong-wan said, “I am so happy to complete registration using Interstage and Fujitsu Primepower. In the registration for the second semester of 2003, we processed 70% of the whole requests (34,000 cases) in five minutes from the opening, and response time was satisfactorily less than

5 seconds.” Section Chief Kim Jin-ho also stated,
 “As a field worker who knows very well how difficult the registration work was before, I am so glad to finish registration successfully, quite different from the past.”



(Process results shown above are only for data inserted to BD on registration.)

The table compares process results in 2003 with those in 2002. Performance for the first five minutes from the opening of registration in 2003 was 2.5 times higher than that in 2002. Due to the characteristic of registration work, the number of transactions dropped sharply from an hour since the opening.

This has proved that all tasks included in the EASY system Web conversion project, which is planned to be completed in November 2003, will be conducted through Interstage. Thus all Web-based tasks to be developed will be processed in a stable environment through WAS (Interstage).

Based on the successful application to the registration system at Youngnam University, Fujitsu Korea plans active promotion and marketing of registration packages for other universities in Korea