

Restructuring of Indirect Materials Purchasing Systems
Delivers \$10 Million in savings per year.

Solution

- Business system consolidation

Industry

- Electronics manufacturer

Products

- PRIMEQUEST 480

Overview



Pic.1 : Fujitsu headquarters, Shiodome City Center.

Fujitsu consolidated three different indirect materials purchasing systems onto PRIMEQUEST and commenced new operations in June, 2006. The resulting system manages the acquisition of office supplies, ICT equipment and facilities management. Critical to Fujitsu’s mission the system handles around 10,000 transactions per day. Fujitsu expects cost reductions of approximately \$10 million (¥1.1 billion) annually by the introducing of the new system on PRIMEQUEST mission critical IA servers.

Following replacement of the direct materials purchasing process, Fujitsu turned its interest in cost reduction to indirect materials purchasing. The majority of such general purchases were office supplies, network equipment, payments to telecommunication carriers, fees paid to general construction and facilities maintenance companies, plus advertising and other service fees.

Three independent systems
- a bottleneck to efficiency

When Fujitsu started the reorganization of its indirect materials purchasing processes in 2004, the three main goals for their plan were: reductions in purchasing costs across all group companies, optimization of the total amount purchased, and reductions in operational costs.

At that time, Fujitsu was purchasing more than \$1.25 billion (¥150 billion) in indirect materials. Five individuals spent three months collecting necessary purchasing data. However, the dispersed nature of the data made collection extremely difficult. It was in fact almost impossible to obtain cooperative data across the group companies. Mr.Hanaoka, Corporate Vice President, Corporate IT unit (Pic.2), worked with the purchasing department to reconfigure the indirect materials purchasing process. The Corporate IT unit is responsible for Fujitsu group information systems, including those of overseas subsidiaries.

“Information on indirect materials purchasing was dispersed across 16 departments and we couldn’t really grasp how much materials each department was purchasing. Also, the operational processes were inefficient with different departments purchasing the same materials using different processes. Furthermore, there were cases where unneeded materials were purchased in two other departments. Not having a purchasing strategy support system created problems, as we couldn’t use overall purchasing information for price negotiations and business judgment.”(Mr.Hanaoka)

Fujitsu background

Under severe competition from developing countries with extremely low cost structures Japanese manufacturers continue to review their operating environment. Reductions in production costs is an emergent issue with many companies trying to reduce the cost of purchasing; a dominant component of total cost. As one of those companies, Fujitsu (Pic.1), in 2000, established a Purchasing Business Unit to start looking at ways to reduce purchasing costs. In addition to its direct materials purchasing of parts and materials ordering for its manufacturing operations, Fujitsu had “indirect materials purchasing” systems for the purchase of office supplies and facilities maintenance. Five years ago, they commenced planning the consolidation of their \$8.5 billion(¥1 trillion) direct purchasing systems. They now operate using PRIMEPOWER 2000 series, the most reliable and scalable UNIX servers for large scale transaction processing. Through system consolidation and reorganization of its purchasing operations, Fujitsu achieved drastic cuts in its cost of direct materials purchasing.



Data Warehouse configuration consolidates information management



Pic.2 : Mr.Hanaoka, Corporate Vice President, Corporate IT unit

With multiple departments purchasing indirect materials, over 36 different purchasing processes were uncovered, including 11 manual processes. The DWH (Data Warehouse), to consolidate the indirect materials purchasing information, was a solution to this problem.

“By configuring a DWH, we consolidated the data coding system and ensured purchasing management and analysis across multiple departments. This enabled more strategic purchasing and negotiations, with the added benefit of scale.”(Mr.Hanaoka)

Along with the DWH configuration, Fujitsu started restructuring indirect materials purchasing system processes. Research into the various systems found inefficiencies in the individual departmental operations. For example, the General affairs department was using PCs, the network purchasing department was using the mainframe and a UNIX server, and the General construction department was using Intel servers.

With indirect materials not directly related to production costs, Fujitsu wasn't managing these costs as strictly as they did direct materials. This was one reason why the system strategy in this area was not consolidated. In addition, software and hardware support termination was expected within 1-2 years. For these reasons, Fujitsu decided to replace all their indirect materials purchasing systems.

Fujitsu had commenced configuration of the indirect materials purchasing system in 2003 and along with configuration of the DWH they started their selection of a specific system. In the summer of 2005 the configuration project was launched. Fujitsu selected PRIMEQUEST, a new product, for the core hardware of the new system.

Fujitsu has many mission critical products including GS series (mainframes) and PRIMEPOWER (UNIX servers). Many of Fujitsu's operational systems are configured using these products. For example, they are currently 21 systems based on the GS series.

Mr.Hanaoka explains the reason why they introduced PRIMEQUEST instead of other products which had longer pedigrees in mission critical systems. “We have few examples of configuring mission critical systems in Linux and we were required to strengthen our know-how in this area.”

He also says, “Since Fujitsu's hardware and software were used in General affair's and Network department's purchasing systems, ongoing support continuation after the official support termination was possible. Continuation might result in cost reductions, but we thought that use of the legacy systems would degrade the motivation of our maintenance staff. For this reason, we decided to take on the challenge of a new approach.”

Challenged to three missions in strategic point of view

The consolidated indirect materials purchasing system will be the first PRIMEQUEST introduction case for Fujitsu's internal mission critical systems. Fujitsu launched a project room in the Cooperate IT unit and 20 employees were transferred there, from other business units.

This project had an important mission. Mr. Hanaoka says, “We decided to take the challenge and configure a mission critical system in Linux and execute transmigration (Migration from a mission critical system) using a TRIOLE configuration.”

The new indirect materials purchasing system introduced clustering using two PRIMEQUEST480 (Diagram 1). Red Hat Enterprise Linux AS was chosen as the OS and the system was divided into 8 partitions. Each partition has 4 CPU and 16GB memory and was planned to accommodate the DB server, Web application server, NAVI server, operation management server and development server. Fujitsu introduced a scalable machine with enough capacity for system expansion and migration from other mission critical servers. Investment in software development for this system is calculated to be more than \$3.4 million (¥400 million).

Not only did Fujitsu consolidated the general affairs purchasing system, network purchasing system and general construction purchasing system into just 5 processes, they also configured systems to replace the manual processes. The account print server (PRIMERGY, Windows) and a system connection server (PRIMEPOWER, UNIX) were retained as these systems were stable and had unique functions.

Consolidated purchasing functions and processes 6 months ahead of schedule

In the summer of 2005 the configuration project started and DWH configuration was completed by October. Operation of the new indirect materials purchasing system commenced in June 2006.

“When doing the transmigration of the online application assets, written in COBOL and C languages, development could be standardized using the “Topjax” framework. As a result, development productivity improved 1.5 times. Also, by introducing TRIOLE configurations, where the operating environment is guaranteed, the time required for designing was drastically shortened. As a result, we moved up the original new system “go live” date (End of Dec, 2006) by 6 months.”

It is safe to say that the introduction of Linux instead of succession or version updates to the former system led to an improvement in system engineer motivation and the bringing forward of the “go live” date.

“Our goal in introducing the new indirect materials purchasing system was to reduce procurement costs, reduce the total amount of purchasing and reduce operational costs.

At this point, our cost reduction target is \$10 million (¥110 million) per year. We can also expect a higher result by introducing the new system to group companies.

In addition to cost reductions, we are also expecting benefits in operation. We assume that we can reduce the operational costs by system standardization.”(Mr.Hanaoka)

Mr.Hanaoka thinks that replacement of the indirect materials purchasing systems is only the beginning of internal mission critical system reconfiguration.



**PRIMEQUEST will be the basis of Fujitsu’s
next mission critical systems**

“As we have already announced, Fujitsu is planning to introduce PRIMEQUEST for the reconfiguration of internal mission critical systems. We are offering this case study to customers as a reference model. PRIMEQUEST project room which was responsible for system replacement now enhances the introduction of PRIMEQUEST in other areas by reusing their know-how accumulated in configuration of this mission critical system. (Mr.Hanaoka)

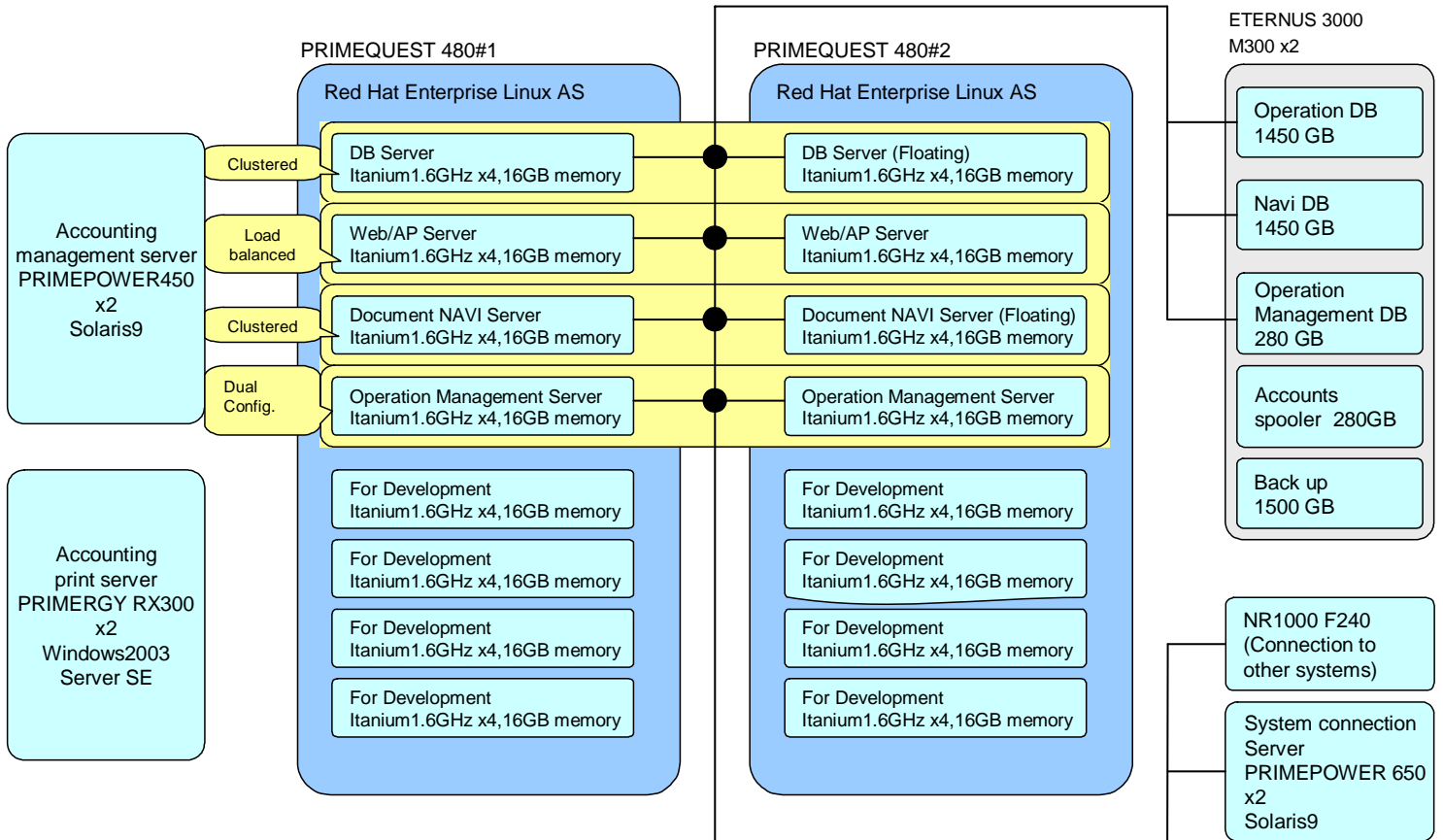


Diagram 1 : Indirect materials purchasing system

Consolidation of multiple indirect materials purchasing systems on GP series (Office computers), GS/M (Mainframes), DS/90(UNIX servers), and Windows servers onto a clustered PRIMEQUEST Linux environment. OS: Red Hat Enterprise Linux AS; Partitions: 8 x 4 CPU with 16GB memory, for DB server, Web application server, Document NAVI server, and operation management server. Half of all partitions are expected to be used as development servers for system migration.