



ITALIAN OLIVE OIL MANUFACTURER ENHANCES PERFORMANCE WITH RHEL5 ON IBM MAINFRAME ZSERIES

FAST FACTS

Industry	Food
Geography	Italy
Opportunity	Ensure the fast processing of customer orders by reducing system response times and maintaining consistent performance levels, even during peak periods.
Solution	Software: 6 virtualized instances of Red Hat Enterprise Linux 5 running on IBM z/VSE and z/VM, DB2/Udb database, Ware Place and Tomcat Hardware: IBM zSeries 9 Business Class mainframe
Benefits	Maintain response times calculating to under one second, efficiently manage various databases with over 24 gigabytes of data and simplify communication among operating systems through use of XML within the mainframe



BACKGROUND

Fratelli Carli was established in 1911 when Giovanni Carli, the youngest son of the oldest family in Oneglia, Italy, began selling the oil produced in his olive grove to the public. Soon, the family's printing business started to incorporate olive oil sales and experienced an increase in customers and olive oil orders. Though unchanged in its traditional values and the quality of its products, Fratelli Carli is today a modern company that delivers its products to hundreds of thousands of customers.

Fratelli Carli's business is unique in its direct sales process. Its products are sold directly to end customers, without any intermediaries, and speed in processing orders is crucial. Orders are mainly received by telephone, but are also available through mail and via its new e-commerce website. Fratelli Carli receives approximately one million orders and sends over two million packages to over 600,000 Italian families per year.

OPPORTUNITY

With speed of ordering and delivery as a key component in the business, the main challenge for Fratelli Carli's IT infrastructure is the ability to maintain reduced response times. Currently, response times average below one second, but it is increasingly difficult for the company's 40 Customer Relation-team operators to maintain the same efficiency levels even during peak periods, such as Christmastime.

Fratelli Carli started its operations with a 360/20 mainframe with a DOS operating system in 1970 and has since migrated to the latest generation IBM z9 Business Class mainframe that runs the z/VSE and z/VM operating systems, which was selected for its reliability and performance. Approximately two years ago, a decision was made to change the IT systems in order to standardize the way customer postal addresses are handled on the z/VSE to ensure consistency and reliability in the data.

"The existing standardization was obsolete and hard to update and integrate," said Marco Gardini, Mainframe System Architect at Fratelli Carli. "Unfortunately, our market research did not produce many alternatives which

are compatible with the z/VSE system. There were very few products available for the mainframe environment, since most are based on new-generation technologies such as C++, Java, and Web standards.”

SOLUTION

Gardini decided to utilize a mainframe and began searching for a solution that would fit well with this hardware. He suggested that the research and development team look for a Java-based solution for a Linux platform that would also work in a zSeries environment. After assessing multiple solutions, the group opted for DB2/Udb database and Egon by Ware Place, a Java-based application that ensures that customer addresses for the Gardini business would be entered correctly.

Once the address standardization software was selected, Gardini assessed various Linux programs and opted for Red Hat solutions.

“I like Red Hat Enterprise Linux because it is a standard Linux product much closer to the logic of a mainframe than other products,” said Gardini. “I am totally satisfied with this choice. Red Hat support is very competent and always available, and it has supported me very well in the completion of this complex project, involving Red Hat Enterprise Linux 5 and Ware Place software developed with Java, on a Tomcat server, which communicates with the z/VSE Cics in XML through a hypersocket network.”

“I believe that over the next few years, we will see the revival of many mainframes thanks to Red Hat Enterprise Linux for IBM zSeries. This revival is due to the interaction among classic mainframe operating systems such as the z/VSE with the CICS TP monitor and the z/VM, with Red Hat Enterprise Linux which is capable of offering the efficiency of an open source system and the graphics of a web server developed with Java,” said Gardini.

In August 2006, Fratelli Carli purchased the IBM z9-BC mainframe with DS8100 disks, which allows the installation of Linux applications on the same equipment that manages z/VSE applications in production. The z/VM, IBM’s sophisticated virtualization system, is essential to the integration of the two environments. In fact, the mainframe has a dedicated IFL (Integrated Facility for Linux) engine, in addition to the traditional Constraint Programming (CP) engine.

As a result, the z/VSE system that contains almost forty years’ worth of data now interacts with the Ware Place Java application and the DB2/Udb database via XML, all managed by Red Hat. This is a complex operation, as the VSE mainframe environment’s data memorization feature differs from that of Linux and Windows; therefore, when a request comes from one of the Customer Relations team operators, an elaborate conversion process begins with a complex search within the database for address standardization and the inverse conversion to return the data to the z/VSE.

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Mainframe System Architect at Fratelli Carli



The project analysis began in 2006 with the search for the application for address standardization and ended in the first quarter of 2007 with the deployment of the Red Hat Enterprise Linux 5 in production. Five out of a team of eleven IT professionals worked on the project in two separate phases: an initial analysis phase aimed at selecting the product and communicating with the system users and a second programming phase which involved the Cobol development of the code that calls the Java product from the VSE.

Genoa's Delphis Informatica - an IBM business partner and a Red Hat Advanced Partner - provided integration for the project and ongoing global IT infrastructure support to Fratelli Carli.

There are now six instances of Red Hat Enterprise Linux running on the z/VM hypervisor on the IBM zSeries mainframe: two with Ware Place, two for testing and development activities, and an additional two with an ERP system from the Italian company RDS for accounting and inventory.

BENEFITS

"I am definitely satisfied with the results associated with Red Hat solutions, although there is still much to do," said Gardini. "We are now able to manage different DB2/Udb databases with over 24 gigabytes of data in an open source environment, thereby offering our customers better service than in the past. We have achieved our aim of keeping response times under one second, communicating among different operating systems through XML within the mainframe."

This was the first IT environment of its kind in the industry, and the IT department at Fratelli Carli had no previous experience to draw upon.

"Red Hat's strong points? Definitely support, which was provided at any time necessary. The attitude of the company in gladly accepting our challenge was excellent as well," said Gardini. "Red Hat Enterprise Linux offers versatility and standardization to a variety of users, as it sets no restrictions."

"I am firmly convinced that Linux is the turning point for the evolution of mainframes, which, now as in the past, continue to be excellent systems in terms of reliability and performance," said Gardini. "As far as we are concerned, this is only the beginning: there will be many improvements in the years to come."

Based on the success of this project, Fratelli Carli has begun to work on a number of new internal projects. The projects involve the transfer of project-management software packages for mainframe-linked hardware infrastructure, such as terminal emulation and printer-management software, currently installed on other platforms, within the IFL engine.