

Migration of a Business-Critical Application at EUROGATE

Conversion to Unix to Pay off in less than a Year

By Isabel Vollmann

EUROGATE is Europe's leading container terminal and logistics group. In order to avoid increased licensing and production costs, EUROGATE migrated its central application for container management at its Bremerhaven terminal location from the mainframe onto a Unix server. The migration costs for the container terminal and logistics group will amortize within one year.

Many large enterprises have successfully run their custom applications on mainframes for decades. These often incur high operating and licensing costs, which only rise with needed hardware updates. In times of strict budgets, it can often pay to question these costs. Unix-based midrange systems can represent a financially more effective and equally powerful alternative.

EUROGATE took the upcoming switch of operating systems from OS/390 to z/OS as an opportunity instead to migrate its container management software at the Bremerhaven terminal location (Container Terminal Operation System = CTOS) to a Sun/Solaris platform. Since January 1, 2006, CTOS is now reliably in production on Unix. EUROGATE's result: significant cost savings, so that the costs of the migration project, according to

the calculations of EUROGATE IT Services, will have amortized within a year.

January 1, 2006 Deadline Determined by Business-Critical Application

The application used in Bremerhaven is responsible for the administration of the entire container handling by EUROGATE at the terminal in Bremerhaven. The core application determines when and how cargo ships are loaded and unloaded, for instance weight-dependent storage, sorting by loading or unloading date – all relative to the ports next visited. Using CTOS, all information entered by EDI (Electronic Data Interchange) or manually is provided to the operations system (Van Carrier Optimizing System = VCOS) in a database. This controls the concrete implementation of the loading and unloading administrated by CTOS (control of cranes, etc.).

“Since our Container Terminal Operation System is considered absolutely mission-critical, its migration to production had to happen on one of the few days when the port is not working. The only plausible date was January 1, 2006, since a few weeks later the switch of operating systems on the host would have been necessary. And that's exactly what we were trying to avoid. It would have been an unacceptable alternative to

shut down operations at EUROGATE in Bremerhaven for an entire day to go live. At least 16 hours of operational downtime would have meant a lot of organizational and financial costs for us,” explained Bernd Huckschlag, head of IT at EUROGATE Bremerhaven.

After the extraction of the last databases just before the end of the year, selected users were able to do logical checking of the data transfer on January 1, 2006, and perform the operational acceptance. Then from January 2, 2006 at 6:00 AM, the internal users, numbering about 130, and other external users (such as rail companies) could work with CTOS as usual – but now on a new, more cost-effective platform. The look and feel for users hardly changed after the migration, so no user training was necessary.

Extensive Migration Project

EUROGATE entrusted the migration project to MaK DATA SYSTEM, who had already performed a similar project for BLG LOGISTICS GROUP, a partner of EUROGATE in 2004, a project of smaller scope in terms of time and budget. There, too, container applications were converted from the mainframe to Unix.

Besides the application itself, the databases and various interfaces must also be converted for EURO-



photo: MaK DATA SYSTEM

Bernd Huckschlag, head of IT at EUROGATE Bremerhaven.

photo: EUROGATE



From the air, the dimensions are clearer: huge container grounds in Bremerhaven.

GATE: The interface to the operating system was rewritten by MaK DATA SYSTEM. The interface to EDI, too, used by external users to exchange information with the Bremerhaven terminal, was adapted by the Kiel IT specialist. Another requirement of the overall project was the migration of interfaces to the billing system, to the Internet (access to container data through a global "Info gateway") and to radio systems. The interface to the VCOS operations system was of

central importance. This system is responsible for sending orders via data radio to the transport vehicles.

MaK DATA SYSTEM also modeled business processes on the Unix server. Since the standard options for administration of jobs on Unix aren't sufficient, an extended custom job control system was also developed, and version management was re-implemented based on PVCS version control system.

"We are very satisfied with the professional project planning and execution by MaK DATA SYSTEM in collaboration with EUROGATE IT Services. The flexibility, pragmatism, and uncomplicated, expert work even on short-term requirements by MaK DATA SYSTEM staff convinced us completely," summarized Bernd Huckschlag.

About EUROGATE

EUROGATE is Europe's leading container terminal and logistics group. Together with Contship Italia, the network operates nine container terminals from the North Sea to the Mediterranean, including Bremerhaven with a trade focus on North America, and Hamburg with a focus on Asia. Besides the container turnover, EUROGATE offers services all around the „box“, from cargo-modal services to container

storage, to container service and repair. The service spectrum is enhanced by intermodal transport and logistics management, IT logistics solutions, and specialized engineering services. EUROGATE was founded in 1999 by the combination of the container activities of the BLG LOGISTICS GROUP in Bremen with the operational business of EUROKAI in Hamburg. Since then, the group has become a market leader

in Europe, with a turnover volume of 12.1 million 20' standard containers (TEU) in 2005. The largest terminal in the EUROGATE network is Bremerhaven, with a volume of 3.7 million TEU in 2005.

◆ www.eurogate.de



photo: EUROGATE

Container terminal at Bremerhaven

Parallel Test Operation Made Central Acceptance Testing Superfluous

EUROGATE was able to save the time, effort, and cost of a central acceptance test through the strategy of numerous individual tests over the course of the project. Because the databases on the old mainframe and the new server were kept identical, continuous comparisons were easy. EUROGATE IT Services, responsible for all information technology for the EUROGATE Group in Germany, could thus test all components piece by piece against production. Stress tests by selected users in the run-up to going live ensured that the bandwidths and computer sizes were sufficient, and that response times were achieved in the desired quality.

Maintenance and 24/7 Monitoring for Safe Operation

The new system is regularly serviced and monitored around the clock to ensure a reliable service.

"We outsourced 24/7 support to MaK DATA SYSTEM for personell and practical reasons. It is a great help to us that our colleagues in Kiel already know the application well from the migration. That makes their monitoring more targeted and specific than if somebody were to do it who wasn't familiar with the application," noted Bernd Huckschlag.

◆ www.makdata.de/sagvision

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