



URL: www.kcsouthern.com
 Industry: Transportation
 Country: United States



Kansas City Southern Railway Company

Modernization strategy is enabling Kansas City Southern to save \$3.5million annually

Challenge

Kansas City Southern Railway Company wanted to reduce its IT operating costs further. The IT department had taken all the headcount reductions it could without impacting operational support for freight movements. The company looked for an initiative that would significantly reduce costs now and in the future.

Solution

- > Micro Focus Studio Enterprise Edition™
- > Micro Focus Server Enterprise Edition™

Kansas City Southern Railway Company

Kansas City Southern Railway Company (KCS) offers the premiere rail route between the industrial heartlands of the U.S. and Mexico. Its customers benefit from seamless transportation across Laredo/ Nuevo Laredo, the largest cross border gateway between the two countries.

Around 2.6 million truckloads originate or terminate in KCS' cross-border target market with approximately 50 percent of loads moving to/from Mexico. KCS operates the rail bridge on both sides of the border.

KCS has been headquartered in Kansas City, Missouri since it was founded by Arthur Stilwell in 1887. The transportation holding company has railroad investments in North America, Mexico and Panama. Its rail holdings and investments are primary components of a NAFTA Railway system that links the commercial and industrial centers of the United States, Canada and Mexico.

IT cost savings demanded

Like all successful and competitive businesses, KCS is dedicated to providing its customers with exceptional, customer-oriented services at the best price. It is committed to reducing its own operating costs to pass savings onto its customers. When Kansas City Southern's CIO, Carl Harrison, was asked to look at potential cost savings within IT operations he knew that a radical approach was called for. "We had already reduced headcount as much as possible and I wanted to propose an initiative that would deliver cost savings both immediately and into the future." Harrison looked at the most significant part of his budget – the operating costs of the mainframe – and took the decision to address these.

Highlights

- > 90% cost savings as \$3.9M annual mainframe maintenance cost reduced to \$400,000
- > Phase 1 saves \$1M in first year
- > No risk to performance and availability of mission critical systems
- > Additional benefits in energy and disaster recovery savings

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Carl Harrison,
 CIO, Kansas City Southern

Radical solution required

The IBM mainframe was not old, it had been brought seven years previously, but maintenance and software costs were running at \$3.9 million a year. Five mission-critical applications running on the mainframe consumed around 1450 MIPS (Millions of Instructions per Second). Recognizing that reducing mainframe MIPS would return a substantial cost saving to KCS, Harrison decided to explore this further. The idea of simply moving the applications onto a different platform was one which appealed. "We did look at rewriting our legacy applications but as they were all relatively new, they were already geared for the future," he explains. As there was no need to reengineer or change the applications at all, for Harrison the most appropriate strategy to follow would be to 'lift and shift' them onto a non-mainframe Red Hat Linux environment.

Low-risk way to achieve cost savings

Discussions with analysts from Gartner and Forrester convinced Harrison that this would be the lowest risk way to achieve the kind of cost savings KCS wanted, and he put the business case together which demonstrated an ROI within two years and an ongoing saving of \$3.5 million a year – a staggering 90% of the cost of maintaining the mainframe environment. "It took five minutes to convince the CFO that this was the right route," Harrison says, "and about the same length of time for me to decide to involve Micro Focus."

The entire mainframe estate to be moved onto a distributed system comprised COBOL, CICS, DB2, MQ, JCL and batch processes for five core applications:

- Management Control System which controls all aspects of train movements, rail car scheduling, crew work orders and waybilling
- Revenue Management System for managing freight revenue and pricing
- Locomotive Management System that controls the movement, train assignments and repairs of freight locomotives
- Car Accounting, a primarily batch processing system for managing payable and receivables from rail car sharing
- Crew Call, the Enterprise Workforce Management system

The application suite targeted for migration was both sizeable and mission critical – not just for KCS but for the railway partners the company's systems interface with. The applications involve around 8.5 million lines of source code and 1,850 production DB2 tables. They are used by over 600 people daily, with many others using the reports produced by the applications.

All but the Enterprise Workforce Management system were developed in-house and the migration project was divided into two phases: Phase one involved moving the four in-house developed applications; Phase two would move the final Crew Call application along with the DB2 development and test environments. The third and final phase of this initiative will enable KCS to achieve its goal to turn off the mainframe and replace the \$3.9 million annual maintenance cost with a far more acceptable \$400K – a saving of 90%. Phase three will be complete prior to Q4 2012.

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Carl Harrison,
CIO, Kansas City Southern

Eight hours to achieve the operationally impacting cut-over

"Moving four major applications in one hit was a strategic decision," Harrison says. "We explored moving one application at a time but each one would involve recreating the interfaces with the applications remaining on the mainframe." In addition, the KCS applications interface to a whole range of systems across US and Mexican customs and other railroad companies and the Transportation authorities gave KCS just eight hours to effect the cut over.

"This was an operationally impacting event," explains Harrison, "involving two countries, two sets of customs and all the partners we interface with." With so much at stake KCS needed to be sure that the migration would be a success, and that there would be no degradation in performance and productivity. Harrison and his team spent time talking to other companies who had already successfully migrated their applications using Micro Focus technology. "We knew it was the right strategy and the right technology," Harrison asserts, "but right up to the actual cut-over I still had some concerns – completely without foundation as it turns out. When we cut-over there were absolutely no issues with the Micro Focus element. It all went very smoothly."

With phase one complete, over 67% of the mainframe MIPS were successfully migrated to the Red Hat Linux environment. "We cut our maintenance costs by one-third there and then," says Harrison. "We've already seen savings of \$1 million this year." KCS has already experienced a number of unforeseen benefits. Today the data center has a smaller carbon footprint, important to a company like KCS which has a strong Corporate Social Responsibility commitment. The migration presented the company with a perfect opportunity to look at its data retention requirement, effectively having a clean-up. "We didn't consider this part of the initial project or cover it in the business case," explains Harrison, "but we've achieved cost savings here and also within disaster recovery as there are more hosting partners for distributed systems than IBM mainframes. More competition means we get a better rate."

KCS positioned as a technology trailblazer

Across the North American railroad industry KCS is seen as a technology leader, as Carl Harrison says, "From conversations I've had with my peers, I can see that the concept of mainframe migration is becoming pretty popular among transportation companies these days. And we're something of a trailblazer in this area. In enabling us to move to Linux, the technology and expertise provided by Micro Focus has put us a step closer to the cloud." This kind of forward thinking will ensure that KCS remains at the vanguard of technology within the railroad industry for some time to come.

About Micro Focus

Micro Focus, a member of the FTSE 250, provides innovative software that allows companies to dramatically improve the business value of their enterprise applications. Micro Focus Enterprise Application Modernization, Testing and Management software enables customers' business applications to respond rapidly to market changes and embrace modern architectures with reduced cost and risk.

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