Overview
Kansas City Southern Railway Company (KCS) offers the premiere rail route between the industrial heartlands of the U.S. and Mexico. Around 2.6 million truckloads originate or terminate in KCS’s cross-border target market with approximately 50% of loads moving to or from Mexico. KCS operates the rail bridge on both sides of the border.

Challenge
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. “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 IT operating costs—and took the decision to address them.

The mainframe 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 appealing. “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 simply move the existing applications to a Red Hat Linux environment.

Solution
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. “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.”

At a Glance

- **Industry**
  Hospitality & Travel

- **Location**
  United States

- **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**
  Moving mission-critical applications without change or reengineering to a Linux RedHat environment.

- **Results**
  - No risk to performance and availability of mission-critical systems
  - Additional benefits in energy and disaster recovery savings
  - Phase 1 saves $1M in first year

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CARL HARRISON
CIO
Kansas City Southern

Modernization strategy enables Kansas City Southern to save $3.5 million annually.
The entire mainframe estate to be moved onto a distributed system comprised COBOL, CICS, DB2, MQ, JCL, and batch processes for five core applications.

The application suite targeted for the move was both sizeable and mission critical—not just for KCS but for its railway partners who also interfaced with these company systems. 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 reports produced by these applications.

Nearly all systems were developed in-house and the project was divided into two phases, moving the in-house developed applications first, followed by the remaining application: along with the DB2 development and test environments.

"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."

"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 move 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 moved their applications using Micro Focus® technology. "We knew it was the right strategy and the right technology," Harrison asserts "When we cut-over, there were absolutely no issues with the Micro Focus solution. It all went very smoothly."

**Results**

With phase one complete, over 67% of the mainframe MIPS were successfully moved 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 project 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 for the mainframe. More competition means we get a better rate."

Harrison concludes: "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."