



# TRAVELERS MIGRATES MISSION-CRITICAL SAS APPLICATIONS FROM SOLARIS TO RED HAT ENTERPRISE LINUX ON HP PROLIANT SERVERS

## FAST FACTS

<b>Company</b>	Travelers
<b>Industry</b>	Financial Services (Insurance)
<b>Geography</b>	Hartford, Connecticut
<b>Business challenge</b>	Aging IBM Power systems running AIX and Sun Solaris needed to be replaced and the SAS Analytics application needed to be migrated to the new hardware, all under strict cost constraints and with high-performance requirements
<b>Solution</b>	Migrate SAS Analytics from two IBM Power systems running AIX to a single HP ProLiant server running Red Hat Enterprise Linux
<b>Migration Path</b>	AIX and Solaris on IBM Power systems to Red Hat Enterprise Linux on HP x86 servers
<b>Software</b>	Red Hat Enterprise Linux, SAS Analytics, JBoss Enterprise Middleware
<b>Hardware</b>	HP ProLiant DL380 Generation 6 (G6) Servers
<b>Benefits</b>	Reduced costs and achieved doubled performance improvements, faster time-to-market of new insurance products, and a satisfied user community



## BACKGROUND

Founded more than 150 years ago, Travelers is a leading provider of property casualty insurance for auto, home, and business. The company's diverse business lines offer its global customers a wide range of coverage sold primarily through independent agents and brokers. Travelers is the second-largest writer of commercial U.S. property casualty insurance and the second-largest writer of U.S. personal insurance. A component of the Dow Jones Industrial Average, Travelers has more than 30,000 employees and operations in the U.S., Canada, Ireland, and the United Kingdom. The company generated revenues of approximately \$25 billion in 2010. For more information, visit [travelers.com](http://travelers.com).

## BUSINESS CHALLENGE

In 2005, after observing the insurance industry's growing awareness of and interest in Linux, Travelers began testing the viability of deploying Red Hat® Enterprise Linux® in its datacenter. It wasn't long before senior IT management declared Red Hat Enterprise Linux as the strategic Linux-based server operating system for the organization going forward.

At that point, Travelers ran a mixed environment that included IBM AIX and Sun Solaris running on proprietary hardware from IBM and Sun. As the price and performance advantages of deploying Red Hat Enterprise Linux on industry-standard machines became increasingly apparent, Travelers began replacing legacy UNIX applications with Red Hat Enterprise Linux applications that offered similar functionality. As a matter of course, all new applications would run on x86 machines on top of Red Hat Enterprise Linux.

Tim Nolan, Manager, Linux Engineering, Travelers said the path was clear: migrate the SAS Analytics applications to Red Hat Enterprise Linux on x86 hardware.

"We knew we'd get great support from Red Hat," said Nolan. "The straightforward administration process for Red Hat Enterprise Linux was a selling point as well. There were several people within the organization who knew how to support Red Hat Enterprise Linux on commodity hardware vs. AIX on IBM's proprietary power machines. It was a green light all around."

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- Tim Nolan, Manager, Linux Engineering, Travelers

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## SOLUTION

As of early 2011, Travelers is halfway through the migration of the SAS Analytics silos from the AIX and Solaris environments to Red Hat Enterprise Linux. Each business unit that has been migrated now has SAS Analytics running on top of Red Hat Enterprise Linux 5 on an HP ProLiant DL380 Generation 6 (G6) Server.

A critical aspect of migrating each SAS Analytics instance involved consolidating the two IBM p590 machines that compose each silo of a single HP server. "This consolidation was not a simple matter," admitted Nolan. "With more than 150 pieces of software in each silo, there were lots of moving parts. In addition to the Linux team, we had to consult with people from multiple groups—for example, our internal SAS experts—and figure out how to customize all the scripts and user configurations for the new environment." Nolan estimated that 90 percent of the work involved provisioning the operating system and application software correctly and transferring the data. "There really isn't an easy way to get 60 terabytes of data from AIX and Solaris to Linux quickly," he said.

Complicating matters, in parallel with the SAS migration, Travelers was accelerating deployment of other business-critical workloads onto Red Hat Enterprise Linux, including extract, transform and load (ETL) applications, enterprise domain name service (DNS) software, email filtering, data mining, backup and recovery, archiving, IP voice applications, and Oracle Real Application Clusters (RAC).



## BENEFITS

Travelers saw dramatic performance improvements across the board once SAS Analytics was successfully running on Red Hat Enterprise Linux.

“We’re seeing performance that is easily twice as fast as we experienced under AIX,” said Nolan. “We also reduced our total hardware and operating system licensing costs by 25-30 percent. I’d say that the case in favor of Red Hat Enterprise Linux over AIX is an open and shut one.”

Travelers has reaped cost savings in other, indirect ways. In conjunction with SAS Analytics, Nolan’s team implemented an ETL application in a Red Hat virtual instance that pulls data from a variety of sources, batches it, and delivers it to Travelers insurance professionals to analyze. “Red Hat Enterprise Linux optimizes storage throughput in a way that has made this process much more efficient and moved the data from the original source to users’ desktops much more rapidly,” said Nolan. “For our research analysts to get their data hours earlier—as they now do under Red Hat Enterprise Linux—is a major boon. They can complete their analyses much sooner and much faster.”

Nolan also appreciates that he can help the Travelers user community speed new products and services to market.

“In the highly competitive insurance market, the quicker you can get new products out the door, the better chance you have of staking a claim in new market categories and attracting new customers,” said Nolan. “We trust that Red Hat Enterprise Linux will continue to be a supportive partner as we continue to expand and innovate.”

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