



Case Study

SAP Solutions

L.B. Foster

L.B. Foster wanted to build stronger customer relationships by sharing relevant information in a more timely manner. To gain this capability and support ongoing business growth, L.B. Foster worked with Protera to complete an ambitious migration to SAP S/4HANA on SUSE Linux Enterprise Server for SAP Applications on the AWS Cloud. This major transformation took just 16 weeks, saving significant time, cost and effort versus a traditional migration, and has given L.B. Foster a stable, flexible, high-performance platform for running mission-critical business processes.



Overview

Established in 1902, L.B. Foster Company specializes in innovative infrastructure products and solutions for worldwide customers in the energy, transportation and construction industries. Headquartered in Pittsburgh, Pennsylvania, L.B. Foster has offices in the Americas, Europe and Asia, providing materials and services for major infrastructure projects, including the restoration of the Brooklyn Bridge and the expansion of the Panama Canal.

Challenge

L.B. Foster works with an international roster of customers on high-profile engineering projects, typically under relentless time and budget pressures. While the company enjoys a strong reputation for meeting its commitments to customers, it constantly seeks new ways to accelerate processes and introduce new services.

George Rembold, Vice President of Information Technology at L.B. Foster Company, said: "As we continue to evolve in our digital capabilities, it's important that we're able to provide timely, relevant information to our customers. We wanted to extend our capabilities and also automate many key functions with our key

steel providers as well as ordering processes with our customers."

L.B. Foster had been running SAP Business Suite on the SAP HANA database for several years, and had introduced the SAP Simple Finance component as the first step towards modernizing its SAP application landscape. To gain the new functionality it wanted, the company decided to upgrade to SAP S/4HANA, in the process replacing its legacy user interfaces with SAP Fiori – which would also provide better support for mobile users.

At that time, L.B. Foster was running its SAP landscape in a private data center. While this hosting model was reliable, the company was eager to benefit from the cost, flexibility and scalability advantages of the public cloud. Equally, L.B. Foster was bringing a new business unit into its SAP landscape within a tight timescale that would not permit the necessary updates to its existing server infrastructure. These elements cemented the case for migrating to the public cloud on AWS.

Migrations of mission-critical SAP systems are always major projects, particularly when the hosting model is also changing. The first, almost universal, challenge is that

LB Foster

L.B. Foster at a Glance:

L.B. Foster provides rail, construction, and energy markets with innovative solutions to build and maintain their critical infrastructure and landmark projects.

■ Industry and Location

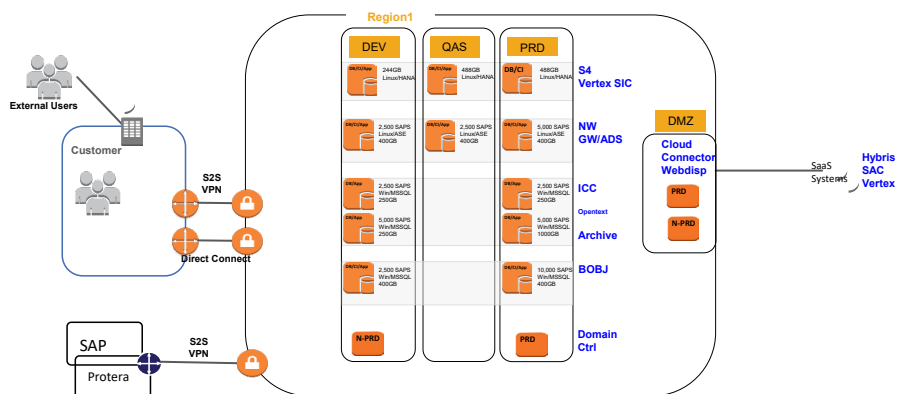
Engineering.
Pennsylvania, United States.

■ Product and Services

SUSE Linux Enterprise Server for SAP Applications (including SUSE Linux Enterprise High Availability Extension)
SUSE Linux Enterprise Live Patching
Protera AppCare Platform
Protera FlexBridge Platform

■ Results

- + Achieved complete migration to SAP S/4HANA in just 16 weeks
- + Minimized risk of migration project through innovative prototyping in the public cloud and utilizing an automated migration platform
- + Significantly reduced cost by leveraging an automated upgrade and migration platform
- + Provides bulletproof high-performance environment for SAP S/4HANA
- + High-availability features and SUSE Linux Enterprise Live Patching ensure ultra-high uptime



auditing the as-is environment is time-consuming and costly, because every SAP landscape contains a unique combination of custom code, custom configurations and integrations, and third-party applications. Incomplete information at this stage tends to delay migration, introducing unexpected tasks that consume project resources and cause cost overruns.

Another frequently encountered challenge is “decision paralysis”. The emergence of new technologies and approaches during a multi-month – or even multi-year – migration project will always add new options into the mix. The sheer number and variety of decisions that need to be made can cause migrations to grind to a halt. Similarly, SAP HANA migrations can be rigorously defined, but simply knowing the technical specifications does not provide any guarantee that the final environment will address the business needs.

Faced with an extremely tight deadline, limited in-house knowledge of SAP S/4HANA and public cloud deployments, and the desire to avoid any business disruption, L.B. Foster set out to find solution

partners that could help it migrate to SAP S/4HANA rapidly, smoothly, cost-effectively and at low risk.

Solution

To accelerate and remove risk from its migration to SAP S/4HANA, L.B. Foster chose to work with Protera Technologies, a SAP Global Partner with multiple SAP certifications that provides complete global IT outsourcing solutions.

“L.B. Foster partnered with Protera because we have a very small staff and we needed some expertise in a lot of extended functions with SAP,” said George Rembold.

Patrick Osterhaus, President and CTO for Protera Technologies, said: “At one stage in the project, L.B. Foster wanted to have a prototype system live within two weeks, which is unheard of in the world of SAP – these projects usually take a year. Using the Protera FlexBridge Platform, we were able to build a working prototype on AWS within the deadline.”

Protera FlexBridge is a SAP Transformation Success Platform designed to act as a

centralized workspace and data repository for the entire process of SAP HANA migration, reducing risk and saving up to 55 percent in time and effort versus a traditional SAP transformation on-premises. The solution automates a number of key project stages, starting with the discovery of the as-is SAP environment. The output from FlexBridge is a complete analysis of the current technology, plus a target recommended solution with gap identification.

“The assessment stage is key because it eliminates so much of the time you would normally need to work with consultants,” said Patrick Osterhaus. “This is how we can get to implementation so quickly, and help our customers avoid excessive costs.”

Protera FlexBridge also largely automates the prepare, explore, and deploy phases, including automatic cloud provisioning, Agile development support, and multiple migration options.

Using Protera FlexBridge, the Protera team was able to provide a comprehensive audit of L.B. Foster’s existing SAP Business Suite on HANA landscape, enabling the engineering firm to understand all the required changes for upgrading and migrating its solution, the available choices and their likely impact on the project, and the cost and timeframe associated with each upgrade option.

L.B. Foster had initially considered a green-field implementation of SAP S/4HANA. Based on the detailed analysis by Protera, the company recognized that it could instead complete a migration of its existing landscape faster, at lower risk and lower cost.

The underlying operating system is a key element in any SAP landscape. For L.B. Foster, it was vital to choose an OS that would maximize the performance and availability of its SAP applications, while ensuring that it could reap the full cost and flexibility benefits of the public cloud. L.B. Foster's existing HANA database was running on SUSE Linux Enterprise Server for SAP Applications, while its SAP Business Suite was running on Red Hat Enterprise Linux.

"Protera showed L.B. Foster how SUSE Linux Enterprise Server is specially tuned for SAPHANA and SAP S/4HANA, and how the SUSE Linux Enterprise Live Patching capability is a clear differentiator," said Patrick Osterhaus. "The tight integration between SAP and SUSE technologies and the close relationship between the two companies also contribute to the dominance of SUSE Linux Enterprise Server in the SAP market. We gave L.B. Foster the confidence that this is by far the most widely used platform for SAP S/4HANA."

"Protera introduced SUSE to the environment which made us feel very comfortable, understanding that Protera had a strong relationship with SUSE," said George Rembold. "It provided us with a very flexible platform and allowed us to quickly move forward on many of our projects."

"On behalf of L.B. Foster, we executed a 100 percent successful SAP migration to the public cloud on AWS and an SAP S/4HANA upgrade in just 16 weeks," said Patrick Osterhaus.

"While Red Hat requires you to separately license the OS, the high-availability components, the storage components and the networking components, SUSE Linux Enterprise Server for SAP Applications provides everything in an integrated package," said Patrick Osterhaus. "Equally, in a world in which Red Hat has been acquired by IBM, SUSE remains truly open and independent, so customers are free to choose their platform."

Using Protera FlexBridge, the Protera team simultaneously migrated L.B. Foster's systems to the AWS Cloud and performed the SAP S/4HANA technical and functional conversions. When a software licensing issue delayed the migration project by four weeks, Protera reprioritized tasks in the project workflow, then accelerated the transformation once the license finally came in, ensuring that the overall project deadline did not slip. The new systems were almost immediately used by the L.B. Foster finance team to perform critical financial reporting, and have since been opened up to a further 200 users in four locations across three time zones.

"L.B. Foster carried out the migration just before the year-end close, which shows the confidence they had in SUSE and Protera," said Patrick Osterhaus.

Using virtual instances of SUSE Linux Enterprise Server for SAP Applications on AWS gave L.B. Foster exceptional agility and speed during the planning and migration, enabling the organization to rapidly prototype new SAP environments by spinning up new virtual resources in the cloud. Both during the project and on an ongoing basis in production, the ability to pause or remove virtual resources enables L.B.

Foster to make significant cost savings by comparison with fixed assets in a private cloud environment.

Results

"On behalf of L.B. Foster, we executed a 100 percent successful SAP migration to the public cloud on AWS and an SAP S/4HANA upgrade in just 16 weeks," said Patrick Osterhaus. "Our decision to base the new cloud landscape on SUSE Linux Enterprise Server for SAP Applications was certainly an important element in the speed and success of the migration."

L.B. Foster executed this major and complex SAP migration and conversion project with its own existing team, and did not need to hire in a large consulting team. As part of its FlexBridge offering, Protera provided a key business functional resource to guide the company through the various business processes.

A further success factor was Protera's "rehearsal" capability, enabled in part by the use of SUSE Linux Enterprise Server for SAP Applications on AWS. These technologies allowed the L.B. Foster team to take snapshots of production SAP environments, rapidly spin up copies of these production snapshots, rehearse the SAP S/4HANA conversion steps, and identify and resolve potential issues – all managed within the Protera FlexBridge Platform.

With the migration complete, L.B. Foster uses SAP S/4HANA on SUSE Linux Enterprise Server for SAP Applications to handle core ERP functions, including financials, order-to-cash, procure-to-pay, build-to-stock, and make-to-order.

“Given the proven success of SAP HANA on the SUSE Linux Enterprise platform, we always recommend that our customers take this route. For Protera as a global service provider for SAP-centric organizations, SUSE is a great partner to have. The SUSE technology works so well for our valued SAP customers and because the company understands SAP best practices.”

PATRICK OSTERHAUS
President and CTO | Protera Technologies

Contact us at:
www.suse.com

L.B. Foster currently has five applications rolled out on SAP S/4HANA, and these will grow to 21 in the coming months. The performance of SAP S/4HANA and the power of the new SAP Fiori user interfaces make it easier for L.B. Foster employees to rapidly access information and make business decisions wherever they are. Ultimately, this means that the company can offer better service to its customers, supporting them by ensuring that the right products and services are delivered at the right time.

“The platform that we are running SAP on with Protera and SUSE helps us deliver relevant information to our customers in a timely manner, with the connectivity between us fully secured and supported,” said George Rembold.

Mission-critical services need bulletproof support; the new SUSE Linux Enterprise Server for SAP Applications landscape on AWS uses the SUSE Linux Enterprise High Availability Extension to keep applications running at all times. Meanwhile, SUSE Linux Enterprise Live Patching allows L.B. Foster to apply critical patches and updates to the

OS kernel without taking down production systems, practically eliminating the need for planned downtime. SUSE provides support services for the SAP landscape, integrating with Protera’s AppCare Platform, which provides 24/7 SAP managed services support by experienced SAP-certified technical staff for L.B. Foster’s SAP S/4HANA landscape. As L.B. Foster continues to move functionality to SAP S/4HANA and decommissions other systems, it will make significant cost savings on infrastructure. At the same time, the company benefits from the flexibility and speed of a fully virtualized environment in the public cloud on AWS, together with the front-end advantages of greater mobility and usability through SAP Fiori.

“While we don’t yet have exact figures for L.B. Foster, our other customers typically report savings of around 60 percent in infrastructure costs by migrating to the public cloud,” said Patrick Osterhaus. “Our customers find that they can frequently shrink their SAP landscapes by 70 percent at times of lower demand, which translates into significant cost savings.”

Protera continues to use the FlexBridge Platform to manage L.B. Foster’s SAP landscape on the AWS Cloud, and is working on an intelligent scheduling function that will include auto-scaling to meet peak demands at month-end, for example.

Choosing SUSE technology to support its customers’ SAP environments gives Protera a stable platform that enables it to focus on higher-level objectives rather than being distracted by low-level technical issues.

“Protera is able to provide us a lot of in-house knowledge and capabilities,” said George Rembold. “SUSE will provide us the capabilities to rehost some of our current operating systems to a platform that’s flexible and can take us into the future. This is the beginning of our relationship with Protera, SUSE and AWS. As I look forward to what we are doing in the future, we have many different environments that we want to bring to that platform.”