



HILTI STANDARDIZES GLOBAL MISSION-CRITICAL SOLUTIONS ON RED HAT ENTERPRISE LINUX, ATIX OPEN-SHAREDROOT, SAP® SOLUTIONS

FAST FACTS

Industry	Construction & Engineering
Geography	Headquarters and global operations based in the Principality of Liechtenstein
Business Challenge	To migrate all SAP® business-critical applications from a discontinued legacy UNIX environment to a scalable and reliable platform and to eliminate vendor lock-in
Migration Path	HP Tru64 UNIX on Alpha Servers to Red Hat Enterprise Linux on x86_64 commodity based hardware
Software	Red Hat Enterprise Linux, Red Hat Cluster Suite, Red Hat Global File System (GFS), ATIX Open-Sharedroot Extension, SAP applications including: SAP Business Suite, SAP ERP and SAP Customer Relationship Management (SAP CRM) and SAP NetWeaver® technology platform
Hardware	185 HP ProLiant servers, the largest machines have 32 CPUs with 128GB RAM
Benefits	Eliminated vendor lock-in; achieved an estimated 50 percent overall cost reduction; increased performance by more than 100 percent; provided ease of management and reliable uptime; reduced electricity costs and carbon footprint; and provided the company with a long-term platform strategy that will help retain expert knowledge and enable the team to be highly responsive to the increasing requirements of a global manufacturing, sales and service organization



BACKGROUND

Hilti Corporation, headquartered in Schaan in the Principality of Liechtenstein, is a world-renowned manufacturer of leading-edge technology for the global construction industry. Hilti's high-performance drills, chisels, cutters, fastening, and measuring systems are used by construction workers around the world. The company's sales and service organization of 20,000 global employees works directly with customers in more than 120 countries around the world, handling more than 200,000 customer contacts every day.

Hilti boasts an internal IT center, including its own in-house SAP solution-based landscape, and places a strategic focus on technology leadership and innovation.

BUSINESS CHALLENGE

An integral part of Hilti's company philosophy is to sell directly to end customers and provide outstanding service at construction sites worldwide. The company's sales and service department make up two thirds of its worldwide staff. Besides high product quality and the constant innovation of Hilti's engineers, the responsiveness and flexibility of its sales and service organization are the main factors that make Hilti stand out from the competition and have ensured the company a loyal customer base.

As part of a family-owned company with a philosophy of sustainable and long-term investment decisions, Hilti's IT organization aims to meet business requirements with agility.

Fundamental investment decisions in IT are made with two key requirements in mind. First, a technology or platform choice needs to be scalable to allow for growth, be able to meet business challenges, and adapt to changes the organization will encounter in the next 15 to 20 years. Second, the platform choice must enable Hilti to retain necessary expertise to manage and develop systems over as many years as possible.

In the early 1990s, Hilti chose to build its mission-critical IT infrastructure on HP's Tru64 UNIX operating system running on Alpha Servers. With this decision, the company was one of the first global operations to migrate to a 64-bit operating system.

In 2004, HP announced it would discontinue development and support for Tru64 UNIX and Alpha Server. This vendor decision required Hilti to develop a new sustainable technology roadmap and select a software and hardware combination that would comply with its 15-20 year strategy for technology investments.

"We were experiencing a classic case of vendor lock-in and the expertise our team had built over many years was suddenly depreciating rapidly," explains Michael Hagmann, head of Enterprise Server Technology at Hilti.

"Trying to extend the lifecycle of the Tru64/Alpha platform was not an option, as we would quickly run into maintenance and hardware issues. We started evaluating alternative platforms with our previous experience in mind."

SOLUTION

When considering alternative platforms, Hilti's enterprise server team assessed open source software from the start. The process started in 2005, shortly after HP's end of life decision.

Initially, Hilti wasn't sure if x86-based hardware would be capable of handling the large amounts of data and tens of thousands of daily transactions its daily business produced. But the prospect of avoiding vendor lock-in completely by building the new infrastructure on open source software made Linux Hilti's preferred operating system.

Hilti's enterprise server team had only three months to evaluate hardware and software alternatives before making the final investment recommendation to the Executive Board.

A strong argument in favor of choosing Red Hat was that all of Hilti's application vendors have certified their products to run on Red Hat Enterprise Linux, which boasts an ecosystem of over 3,000 certified software applications. Hilti uses a broad array of SAP applications. Its largest and most critical systems rely on SAP ERP and SAP CRM, each with more than 5TB of data stored.

Hilti's enterprise server team wanted to continue managing its clustered systems as one single "root disk." An add-on called "Open-Sharedroot" from Munich-based ISV and consulting company Atix, which specializes in Linux environments and complex clustering projects, provided that for Red Hat Enterprise Linux.

"We migrated to SAP applications on Red Hat Enterprise Linux on HP ProLiant servers after evaluation and testing. The combination of SAP solutions on Red Hat Enterprise Linux has delivered significant improvements in performance and power-efficiency, which means cost savings and a reduced carbon footprint."

-Martin Petry, CIO at Hilti

"In the end, we had the perfect partners for our migration," said Hagmann. "We had Red Hat Enterprise Linux, the possibility to continue working with a shared root cluster after the migration, plus the commitment from Atix and Red Hat to support our project from start to finish. A migration of this scale had never been done before anywhere, and many believed we would face challenges, but we were confident that the solution's benefits and performance were enterprise-ready."

As an SAP customer, Hilti wanted to consolidate, standardize, and expand its SAP software environment to improve its business performance and enhance its systems reporting capabilities.



"Our business-critical systems like SAP ERP and SAP CRM are all centralized at our headquarters," explained Hagmann. "Our sales and customer service employees around the world rely on these SAP applications to be up and running 24/7, so migration-related downtime was not an option."

Hilti started with moving less mission-critical applications to the new platform in winter 2006/2007. SAP CRM was migrated at the end of 2008 and has been fully operational and stable since January 2009. As the last step, SAP ERP was migrated and ready for production in May 2009.

ATIX and Red Hat supported Hilti's migration with a dedicated Technical Account Manager and two members of support staff who had access to duplicate test systems at Red Hat and guaranteed quick responses to support tickets.

"With such a large-scale, and mission-critical migration, we built our relationship with Red Hat early and our decision to utilize a Technical Account Manager saved a considerable amount of time," said Hagmann. "ATIX and Red Hat's dedication to making our lives easier and pulling this huge migration project off together was an indispensable asset to us."

BENEFITS

With the new enterprise server environment, Hilti's business-critical IT infrastructure is scalable and vendor-independent. A key benefit of the migration is that the knowledge about the Red Hat Enterprise Linux-based infrastructure can be retained in Hilti's IT organization over many years to come, enabling the company's own experts to scale the systems to match future business needs.

"We migrated to SAP applications on Red Hat Enterprise Linux on HP ProLiant servers after evaluation and testing. Since migrating, we have experienced increased performance of more than 100 percent. We also reduced IT costs with a commoditized architecture. Having a tight level of integration between Red Hat and SAP support organizations gives us the confidence to continue along this path and further reduce our costs by migrating all of our SAP environment to Red Hat Enterprise Linux," said Martin Petry, CIO at Hilti.

"Considering that we lost a lot of know-how as our legacy Tru64/Alpha servers were switched off, it's very reassuring to know that Linux and x86_64 processors will be around for many more years to come, independent of the fate of individual vendors or their product decisions. The expertise we have gained is here to stay," said Hagmann.

The new Red Hat-based platform has additionally brought performance gains to Hilti. Its IT infrastructure is now capable of handling more computing requests with the same number of CPUs as its legacy systems, but now uses less rack space. Lower electricity consumption and a "greener" footprint of the IT infrastructure are additional benefits.

"Running our SAP applications on Red Hat Enterprise Linux has delivered significant improvements in performance," said Hagmann. "And the servers are very power-efficient, which means cost savings and a reduced carbon footprint."

A large portion of Hilti's cost savings result from the elimination of software licensing fees with open source software.

"While it is still early to determine the exact total cost of ownership as we've just completed migration, our estimates show that our cost benefits are likely to exceed 50 percent compared to our previous UNIX platform," said Hagmann.

"As a company driven by innovation and passionate engineers, we're very happy to have made this big step to standardizing on SAP applications on Red Hat Enterprise Linux and industry-standard servers," said Hagmann. "Now we can benefit from faster innovation cycles of standard hardware and be assured that all the software we need, be it for the operating system or the applications, is actually available on-demand. This clearly gives us a competitive edge in our business operations, as the IT department is able to meet new requirements very quickly."



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