

ABB Minden extends the lifespan of its power plant technology with CHARON-VAX



The Challenge

The Minden plant plays an important role within ABB. Although the company has long outsourced the bulk of its IT systems to IBM Global Services, “there are still production environments that we cannot outsource,” said Horst Krückemeier, head of system integration, IT support, and logistics for Energietechnik-Systeme at ABB Minden. Decades ago, the Minden facilities were set up with automation processes developed, documented, and transcribed to a proprietary automation system created in-house. For almost three decades, ABB Minden kept two redundant VAX-11/750 in operation. They continuously updated the VAXes with hardware refreshes and software updates, including cluster technology, after it was introduced by Digital in 1998. Using the latter technique, they upgraded the operating system from VAX/VMS V4.0 to VAX/VMS V5.0, and later to OpenVMS VAX V7.2. All systems ran steadily, serving engineering, and allocating function and connection plans to workstations.

After Compaq’s acquisition of Digital in 1999, however, the VAXes could no longer be upgraded. ABB integrated the VAX-based engineering software into its newly developed automation system, Symphony. This meant that the VAXes had to be kept in service, as they continued to provide protection for all software releases. They had been so well maintained that tape backups could be activated at any time with the required hardware. Also, they remained in use as database servers in Minden for the development of another business unit. However, the VAXes and their storage clusters took up a disproportionate amount of space in ABB Minden’s data center, and consumed a lot of power and resources for maintenance.

The Solution

ABB Minden then restructured and downsized its data center, and the one remaining VAX did not fit into the new facilities. At the time, however, the company was in no position to abandon the old data pool. Horst Krückemeier and his team therefore began to look for a virtualization tool that could emulate the old VAX/VMS environment using contemporary x86 hardware.



PARTNER PROFILE

Invenate GmbH provides consulting and solutions for IT infrastructure. Its certified system engineers for OpenVMS (HP OpenVMS CSE) support VAX, Alpha, and Charon installations throughout Germany. Invenate consultants have special competence in all leading virtualization solutions for server environments with high availability requirements and legacy systems. In Microsoft environments, Invenate specializes in network and exchange infrastructures. Invenate’s customers include major manufacturing and financial companies, as well as mid-sized enterprises with complex network infrastructures or high availability requirements. For more information, please visit:

www.invenate.de



CUSTOMER PROFILE

ABB Division Energietechnik-Systeme, headquartered in Mannheim, Germany, provides engineering services for control systems in power plants, water installations, switchboard plants, network control systems and electrical grids. ABB’s Minden branch, ABB Automation Products, designs, delivers and maintains turnkey customer-made control and communication systems for gas-, oil- and coal-fired power plants. It also develops and manufactures pressure and flow sensor technology, as well as element actuation systems for industry and power plant technology. For more information, please visit:

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The Result

The test run of CHARON-VAX at ABB went without a hitch, and proved the effectiveness of virtualization. All old applications now run smoothly in the virtual environment, which has the same look and feel as the original system. Martin Schäfer, project technician at ABB Minden, agrees: "If it wasn't for a noticeable increase in operating speed, development and maintenance engineers wouldn't even know that their data is not coming from an old VAX anymore." At present, ABB Energietechnik uses only one CHARON-VAX license, but this will soon change. The plan is to shut down the old VAXes and replace them with contemporary x86 workstations and CHARON-VAX software. As Horst Krückemeier sees it, only the ghost of the old machines will remain, since CHARON-VAX has ensured the original databases and specialized software will live forever. He also identifies another opportunity: "It was way too expensive to install a VAX at the clients' end to support revisions of power plant documentation. In the past, part of our customer service consisted in computing the necessary revisions into our VAX. With CHARON-VAX, however, our whole data center fits in a double-height x86 machine with a 19-inch footprint, with better performance and full functionality, as well as customer-made connection plans for power plant automation.

About Stomasys

Stomasys is the original and leading provider of enterprise-class cross-platform virtualization solutions, including PDP-11, Digital VAX and Alpha, HP 3000, and SPARC servers. The company extends the life cycle of business and mission-critical systems through virtualization, modernization, and system enhancement.

Founded in 1998 and headquartered in Geneva, Switzerland, and in Boston, Massachusetts, with sales offices as well as engineering, development, and research labs located around the world, Stomasys has implemented more than 5,000 cross-platform virtualization solutions for the world's leading companies in over 50 countries.

«*Confidence in CHARON-VAX at the Minden site continues to grow, and even long-serving employees are convinced by the reliability of the Swiss-made virtualization software. ABB immediately benefitted from the flexibility.*»

Horst Krückemeier,

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