

nerve

TTTech
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Case Study: Azure & Nerve

Out-of-the-box industrial edge computing



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Microsoft Azure is the leading cloud hyperscaler in the manufacturing business.

Challenge

Manufacturing companies and machine builders, whether large or small, are eager to derive valuable insights from their machine data and run value-adding applications near the machine – at the edge. They could not achieve this with an out-of-the box solution thus far and instead had to invest in customized solutions and integration on a machine or plant level that does not scale.

Solution

Azure and Nerve are an ideal combination to solve this challenge for machine manufacturers. Nerve provides a proven and productized solution for high-performance, real-time machine connectivity, edge application hosting of all relevant types of industrial workloads, and the centralized management and logging/monitoring of these workloads.

The data collected with Nerve is seamlessly transferred to Azure, either already at the edge – using Azure IoT Edge – or in the cloud via Azure IoT Hub. Once available in Azure, customers can leverage their data using advanced cloud services such as stream analytics, Azure databricks, and machine learning or visualize data with well-known, intuitive tools such as Power BI.

Benefits

The combination of Nerve with Azure provides an out-of-the-box solution for customers to quickly start with edge computing and save on limited financial

“ The combination of Nerve and Azure is a great example of the power of an edge-to-cloud infrastructure. Customers benefit from Nerve’s real-time Data Services at the edge and generate insights with Azure’s industrial cloud capabilities. ”

Georg Binder
Senior Cloud Solution Architect
Microsoft

and human resources for customization integration. This allows them to focus on data-based value creation for their operations and their own customers.

Nerve and Azure are designed for scaling to dozens of factories or thousands of machines and have been in productive use for years. Thanks to Nerve’s open architecture, the system is futureproof, as it can be extended and enhanced with additional functionality at any time and without limitation to specific vendors or ecosystems. Azure is the most rapidly developing cloud platform for manufacturing, and it is continuously evolving – driven both by Microsoft and the numerous ecosystem partners such as independent software vendors (ISVs) and system integrators (SIs).

Another huge benefit for machine manufacturers is that Nerve supports the use of legacy applications. Existing shopfloor applications mostly run on Windows or Linux industry PCs. There are clear economic and organizational benefits in re-using them, which Nerve accommodates by its full virtualization capability: Legacy systems can be preserved as virtual machines (VMs) and incorporated into a modern IoT platform, where they run next to – usually newer – container-based (Docker) software.