

Schwarzthal Tech Leverages IBM LinuxONE for High-Performance AI Inferencing and Secure Data Serving

IBM LinuxONE 4 offers an ideal infrastructure for predictive AI workloads, enabling businesses to drive value with speed and scale

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We recognize the important role that infrastructure plays in the success of our projects and data management initiatives. With its on-chip AI accelerator, IBM LinuxONE 4 is engineered for speed and scale, providing a dedicated resource for AI inferencing to enable huge levels of throughput. IBM internal testing found that IBM LinuxONE Emperor 4 can process up to 3.5 million inference requests per second with 1ms response time using a Credit Card Fraud Detection model¹. By exploring the potential, startups and small to medium-sized businesses may have the opportunity to enhance their operations and potentially deliver additional value to their customers.

In addition to its high-performance AI capabilities, IBM LinuxONE is designed with security at its core. Its built-in security features, such as pervasive encryption and secure execution environments, are engineered to protect sensitive data, giving businesses the tools to innovate and grow in a complex and regulated landscape. Moreover, it is designed with a focus on energy efficiency, which helps optimize power consumption and contribute to a more sustainable IT infrastructure.

We utilize IBM LinuxONE through the IBM Hyper Protect Accelerator program which is a startup accelerator and technical mentorship program. The program supports startups leveraging highly sensitive data to improve the security of, and access to, digital assets, financial, healthcare, AI and other services. IBM provides selected startups with support to enable confidential computing so that startups can protect sensitive customer data via IBM's flagship offering known as IBM Hyper Protect Services, which runs on IBM LinuxONE. Startups can also leverage IBM's compatible set of products and services, including machine learning, artificial intelligence (watsonx), digital assets and blockchain.

As part of the IBM Hyper Protect Accelerator program, we are better equipped to help our customers by leveraging the industry-leading security that IBM Hyper Protect offers for our innovative technologies and robust support system. At Schwarzthal Tech, our mission is to revolutionize compliance in the financial sector through our groundbreaking Know Your Network™ (KYN) approach. KYN utilizes real-time, data-driven graph methods to assess and qualify the risk of counterparties, shifting from traditional KYC processes to a comprehensive network-based analysis. Our AI-driven platform, Wunderschild, is at the

¹ DISCLAIMER: Performance result is extrapolated from IBM internal tests running local inference operations in an IBM LinuxONE Emperor 4 LPAR with 48 cores and 128 GB memory on Ubuntu 20.04 (SMT mode) using a synthetic credit card fraud detection model (<https://github.com/IBM/ai-on-z-fraud-detection>) exploiting the Integrated Accelerator for AI. The benchmark was running with 8 parallel threads each pinned to the first core of a different chip. The `lscpu` command was used to identify the core-chip topology. A batch size of 128 inference operations was used. Results may vary.

forefront of this innovation, providing unparalleled financial crime intelligence by building, visualizing, and analyzing complex global networks.

Wunderschild's AI core features include:

- an Entity Resolution engine (Alruna), which accurately identifies and links entities across diverse data sources with multilingual and multi-alphabet resolution capabilities and
- a Generative AI layer (Persephone), which transforms complex graphs of interconnected entities into insightful textual descriptions using advanced natural language processing to enhance users' understanding of financial connections.

As a part of the IBM Hyper Protect Accelerator Program, Schwarzthal Tech is excited to be working closely with IBM to bring new innovations to our customers.

To learn more about Schwarzthal Tech, please visit our website [here](#). To learn more about IBM LinuxONE 4 and AI visit [IBM Z and LinuxONE Community](#) and sign up.